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HANDBOOK
OF THE
MEDICAL SERVICES
OF
FOREIGN ARMIES.

PART IV.—RUSSIA.



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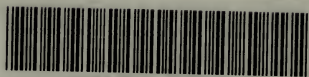
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INTRODUCTION.

In 1902 a "Handbook of the Medical Organisations (Chiefly for War) of Foreign Armies," by Lieut.-Colonel Frank Howard, Army Medical Staff (Retired Pay), was published officially. It contained a short account of the field medical units and some other details of the army medical service of twenty different States, and has been used as one of the text books for the examination of officers of the Royal Army Medical Corps qualifying for promotion to Lieutenant-Colonel.

In consequence of the Geneva Convention of 6th July, 1906, a knowledge of these services has become of greater importance than previously to officers of the army, more especially to officers of the Royal Army Medical Corps, and to all who may be associated with that corps in time of war. It has been found advisable therefore to alter the character of the handbook considerably in order to present a wider and more general view of the military medical services of other countries.

The plan has been adopted of preparing accounts of the more important of these services and publishing them in separate parts as each is completed. This will not only facilitate revision as changes occur in the future, but will place the parts in the hands of officers with less delay than if the plan were followed of issuing a complete revision of Colonel Howard's handbook in one volume.

The several parts are being compiled by Lieut.-Colonel W. G. Macpherson, C.M.G., R.A.M.C.

General Staff,
September, 1907.

HANDBOOK OF THE MEDICAL SERVICES OF FOREIGN ARMIES.

PART IV.

THE MEDICAL SERVICE OF THE RUSSIAN ARMY.

CHAPTER I.

HISTORY.*

The science and practice of medicine were not fully recognized in Russia until the accession of the House of the Romanovs to the throne in the earlier part of the 17th century. Much, however, is heard of doctors in the previous century, especially during the reign of Ivan the Terrible (1534-1584), for at that period several English and other foreign physicians were retained at the Court, and occupied influential positions amongst the Russian noblemen and statesmen. The names of Standish, Elmes, Roberts, Frensham and Elysius Bomelius, a German, educated at

* For most of the facts in this chapter the compiler is indebted to the works of Knorr ("Entwicklung und Gestaltung des Heeres-Sanitätswesens der europäischen Staaten," Hannover, 1883), and Myrdacz ("Das russische Militär-Sanitätswesen," Safár, Vienna, 1896). Other works have also been consulted.

Cambridge and married to an Englishwoman, amongst others are connected with the events of Ivan the Terrible's reign. James Roberts was the most prominent, perhaps, amongst them. He had been sent to Ivan by Queen Elizabeth in 1581, and became known in Russia under the name of Roman Elizariévitch Jacobi.† "But not the whole of them put together," writes Waliszewski,‡ "could have induced any native-born Russian to swallow a pill or accept any similar remedy." "The moment a Muscovite fell out of sorts he drank a glass of brandy, seasoned with pepper or garlic, ate a slice of lemon, and took a douche. This was the usual course of treatment for every complaint."

Foreign doctors continued to come, generally from England and Scotland, to the Courts of Ivan's successors. Throughout the whole history of the Russian army medical service English and Scotch names are prominent, and, as is related below, it was an Aberdeen graduate, Wyllie, who held the position during the Napoleonic wars in the Russian army medical service which his fellow countryman and contemporary at Aberdeen University, McGrigor, held in the British army.

These court physicians were held in high honour and were richly paid for their services. A definite quantity of bread and fuel and a barrel of wine were given to them monthly, and they received daily a quart of brandy, vinegar and other victuals, as well as three spoonfuls of food from the Tsar's own kitchen. Estates, serfs and attendants, horses, precious stones and furs were also given to them, especially when the medicines which they prescribed were effective.

Under the earlier Romanovs there gradually developed an indigenous medical profession in Russia; state control was exercised over it and measures for improving the conditions of medical practice, for increasing the number of medical practitioners and for the prevention of disease among the people were introduced.

In 1620, under the Tsar Michael, the first of the Romanovs, a pharmaceutical council was formed, with a dignitary of the highest official rank in the empire as president and with the

† Jakobi is a well-known character in modern plays staged in Russia, in which the scenes are enacted at the Court of Ivan IV.

‡ "Ivan the Terrible," by K. Waliszewski, translated from the French by Lady Mary Loyd. (p. 110.)

Tsar's body physicians as members. In the previous reign, that of Boris Godunov, some supervision over medical men and apothecaries appears to have existed, for there was at that time a state dignitary with the title of Apothecary *Boyar*, and it was to develop the functions of this dignitary that Tsar Michael founded the pharmaceutical council. At the same time Russians were sent to study medicine in foreign universities, chiefly in England and Holland. It was in Michael's reign, too, that mention is first made of a medical personnel with troops, for, when a colonel of the Russian Army, Damm, was sent in 1631 to raise troops in Germany, a medical officer is shown on the establishment of the regiment raised by him. From that time onwards efforts appear to have been made to appoint to each regiment men who had been trained in the practice of medicine and surgery. They were placed under the control of the pharmaceutical council and were given assistants, who formed a body of men similar to the *Feldscherer* of the early days of the German and Austrian medical services, and who still exist under the name *feldsher* in the Russian army.

It was not, however, till the reign of Peter the Great (1689-1725) that a definitely organized army medical service came into existence. The army which existed in Russia until his time was a corps of men, called *Streltsi* (in German writings *Strelitzen*), a name derived from the Russian word *Strelyat*, "to shoot," and signifying in English arquebusiers or musketeers. They occupied a special suburb in Moscow, which was called after them. This body of men numbered sometimes as many as 40,000 or 50,000. They were the infantry of the Tsar's army, followed various trades while no fighting was going on, and brought up their children as hereditary soldiers of the empire. The nobility, who lived during peace on their own lands, formed the cavalry. The *Streltsi* were a privileged class, and became in time indolent and incapable. When Peter the Great demanded from them more work and greater efficiency, they became discontented and dissatisfied; in 1698 they revolted against his rule, and were wiped out of existence amidst acts of unparalleled bloodshed and cruelty. In their place a new army was created on an European model. Foreign mercenaries were obtained for it. It became a standing army in the real sense of the term, and a medical service was established in connexion with it.

In 1707 the pharmaceutical council had been converted into a state department or office, and the Tsar's body physician, a Scotchman of the name of Erskine, became its head with the title of *archiater*. He had the direction of everything connected with medical professional matters, state hygiene and medical jurisprudence, and submitted his reports in person to the Tsar. By the appointment of *archiater*, a medical official instead of a lay dignitary became the central administrative head of the medical service.

In 1720 the name of the state department of which the *archiater* was the head was changed from "pharmaceutical" to "medical" council. In the following year, on the proposal of the *archiater*, it was converted into a *collegium medicum*.

Before this date, however, considerable advances had been made in providing a medical service to Peter the Great's new army. In 1706 the first purely military hospital was established. This was in Moscow. In 1715 another military hospital was opened in St. Petersburg and about 500 small military hospitals in the different garrisons throughout Russia. The St. Petersburg hospital was placed under the officer who performed at the time the functions of a quartermaster-general.

Medical schools were established in connexion with the Moscow and St. Petersburg hospitals, works of eminent foreign writers were translated into Russian, a number of highly qualified men were appointed as lecturers, and botanical gardens were formed. The number of students in each school was about 50. Amongst other noteworthy efforts of Peter the Great to encourage medical education in these schools may be mentioned the fact that he purchased during his European travels for a large sum of money and sent to Russia the famous collection of anatomical and surgical preparations of Professor Ruysch of Holland. He also arranged for the ablest of the young medical students to proceed to other countries for purposes of study.

All this led to a definite organization of a medical service for the army, which was issued as an imperial *ukas* in 1716 and remained in force till the beginning of the 19th century.

In the organization of an army medical service by Peter the Great, the *collegium medicum* was the central administrative authority, the *archiater*, or president, being given

the relative rank of major-general, the first physician to the Tsar that of colonel and the other court physicians, who were members of the board, that of lieutenant-colonel. To each general's command or division a principal medical officer, or field physician and a staff surgeon, or staff *feldsher* as he was called, and two field apothecaries were appointed. The field physician controlled the work of surgeons and apothecaries, and acted generally as a consultant. The staff surgeon performed the more serious operations and acted as consulting surgeon to the regiments.

The field apothecaries had to prepare and supply the various medicines which might be prescribed. There were two dispensaries in the division, one for infantry and one for cavalry, and each had a personnel of one field apothecary, 2 apothecary's assistants, and 4 apothecary pupils.

The regimental medical service consisted of a regimental surgeon or *feldsher* with each regiment, and a *feldsher* with each company. Their duties were not only to treat the sick and wounded, but to do a certain amount of shaving both for officers and for men. Medical treatment was free to all except officers suffering from syphilis, from whom fees could be demanded.

Field hospitals were organized at the same time. Their establishments included a hospital inspector or administrator, a chaplain, surgeons, and apothecary assistants with a good field dispensary. One healthy soldier and a few women for attendance on the sick and for laundry work were appointed for every 10 patients. A cook, a baker and a caterer were also on the establishment of field hospitals. Each division had two such hospitals both for peace and war. They could be opened in towns, villages or tents, according to circumstances. Regimental non-commissioned officers were attached for the maintenance of discipline and hospital guards were also appointed. The field physician and staff surgeon were obliged to visit the field hospitals at least once a week and prescribe medicines. The regimental medical officers visited the patients morning and evening and a return of sick was submitted weekly to the staff surgeon for the information of the General Officer commanding the division.

After the death of Peter the Great army medical organization was neglected, the duties of principal medical officers and chiefs of military hospitals were negligently performed, and

the hospitals themselves were not properly maintained. This led to the appointment of combatant officers as military commanders of hospitals, and to the dual control of hospitals which has existed ever since in the Russian army medical service.

The reign of Elizabeth (1741-1762), daughter of Peter the Great, witnessed some important changes in medical education, which were to have an influence on the military medical service. Schools were formed for training as nursing orderlies the children of soldiers. This was the origin of the educated *feldsher* in the present meaning of the term. Then, in 1755, a medical faculty was founded in Moscow, schools for *feldshers* were opened in Moscow and St. Petersburg, lecturers were appointed to the schools connected with the hospital, quarantine establishments were formed in Astrakan, and courses of instruction were given to divisional principal medical officers. In 1756 appointments of surgeons-general were made in connexion with the field army.

In 1762 the head of the *collegium medicum*, apparently an Englishman, James Mounsey by name, obtained for all the army medical personnel, of whom there were then 313, definite rank and increased emoluments; regimental and staff medical officers wore uniform from this time onwards. In the same year a volume of instructions for medical officers serving in the army, navy and other public services was issued, and a system of pensions was brought under definite regulations, widows and orphans of medical officers being also placed on the pension list.

The development of medical education and especially of the various ranks of the military medical service was continued throughout the reign of Catherine II (1762-1796).

This ruler endeavoured to enlarge the scope of medical education and to increase the number of medical practitioners of Russian birth, in order to do away as much as possible with the foreign physicians and surgeons, who dominated medical affairs in the empire. The medical college was re-organized in 1763 with two sections, one to control the training of Russian subjects in the art and practice of medicine and surgery, and the other to control the training of officials in the administrative duties of the medical profession. The work of these two sections was co-ordinated under a president, who was a state councillor and not a member of the profession. After this organization had been

in existence, however, for 23 years it failed to effect an improvement in the standard of medical knowledge and education amongst Russian subjects, and Catherine II then appointed a committee to put forward proposals for giving better effect to the objects which she had in view. This committee also failed to effect her purpose, and in 1791 the Empress placed the administration of the whole of the medical service throughout the empire in the hands of one of her councillors, Count Vasiliev, who afterwards became finance minister. Vasiliev devoted all his energies to the task, and introduced a system of local medical administration in the capitals of all the government provinces, with the exception of Moscow and St. Petersburg, which had already a medical college. Each local administrative authority consisted of an inspector or city physician, an operating surgeon, and an obstetric surgeon. They regulated questions of public health within their district, and all the district and regimental medical officers, as well as the medical institutions, general hospitals, regimental hospitals, state and private dispensaries were placed under their control. In the event of concentration of troops for an expedition outside the empire, the local authority had to provide each division with a medical inspector, and in case of actual war also with an operating surgeon. The decree introducing this form of mixed civil and military medical organization was issued in 1797, after the death of Catherine. The membership of the medical college was increased in 1799 and formed 5 sections, of which the 2nd and 3rd were concerned with army medical matters.

Vasiliev also effected changes in the status of the teaching institutions and in the qualifications required for appointments to the posts of regimental medical officers. Medical schools existed in St. Petersburg, Moscow and Kronstadt for the training of assistant surgeons in the army, and Vasiliev had the schools in the two capitals raised, in 1799, to the dignity of military medical academies, with the same privileges as those of the medical faculty of the University of Moscow, with which indeed in 1810 the Moscow military medical academy was eventually amalgamated. The younger *feld-shers* were also sent to the hospitals in St. Petersburg for further training.

On account of the scarcity of medical men in Russia, it

had been customary to appoint to regiments men who had only gone through a partial curriculum of medical study. In 1798 Vasiliev introduced a regulation by which the right to practise medicine and to hold a medical appointment in the army was granted only after at least 5 years' attendance at one of the higher medical educational institutions and after passing an examination. The nomination to the rank of "senior" or "junior" surgeon—the former term being applied to medical officers exercising administrative or directing functions and the latter to those doing executive work—was granted according to the standard of knowledge shown at the examination.

These regulations emancipated Russia for the greater part from the control of medical officers from foreign countries; and those who did enter the Russian service then were obliged to learn the Russian language.

Until the beginning of the 19th century, there was, as may be gathered from the above account, considerable confusion regarding the education, titles, and general condition of the military medical service in Russia as distinct from the practice of medicine in civil life. With the accession of Alexander I to the throne in 1801 important changes were made in this respect, and army medical organization entered a new phase of development. In the first instance, civil medical administration was separated from the military and naval, and eventually from the police medical services. In 1802 the medical college was placed under the ministry of the interior and subsequently abolished as a separate organ of administration, questions of medical science and practice in Russia being referred to a body of medical councillors. In 1805 one finds thus three definite medical administrative bodies in existence; that of the ministry of the interior, that of the ministry of war, and that of the admiralty. Later on, in 1811, when a ministry of police was formed, a medical administrative department was attached also to it, and a medical council formed to consider higher questions of administration affecting both the civil and military medical services.

As regards the army medical service as a separate organization, the administration both in peace and war was placed under a medical director-general, with a surgeon-general as his assistant. The director-general had the higher medical degree of doctor, his assistant the lower or

surgical qualification. In military command districts all the medical officials and institutions were under the control of the district inspectorate, to which medical and deputy medical inspectors were attached. Military hospitals were controlled by combatant officers, with medical officers in charge of purely professional duties. The regimental medical service was under the charge of the senior medical officer, who was directly responsible to the officer commanding the regiment. Later on, in 1808, the administration of the medical service at the War Office was converted into a medical council, formed of a president and 4 councillors, to be changed three years later into a definite medical department, with a director-general, a deputy director-general and clerical officials as its headquarters' staff.

The first director-general was the Tsar's body physician, James Wyllie. His title was that of "Chief Inspector of the Army Medical Service." This officer, who accompanied the Tsar Alexander I on the occasion of the latter's visit to England, and who was knighted then by the Prince Regent, graduated in Aberdeen University in 1794. He served in the Russian army in the Eletsy Regiment, became physician to the Imperial Court in St. Petersburg in 1798, and was surgeon-in-ordinary to the Tsar Paul. Subsequently he held all the highest administrative posts in the Russian army medical service until after the Turkish war of 1828-29. He died in 1854, with the relative rank of general (2nd class of official rank) and the dignity of a baron of the Russian empire. One of the best known hospitals in St. Petersburg is named after him.

Not only did Wyllie's influence raise the standard of medical science and improve the *status* and conditions of service in the army medical service, but it also had marked effect on the development of the field medical organization. The staff of an army in the field was divided into four sections, respectively under the chiefs of the general staff, engineers, artillery, and intendance. The medical services came under one of the two sub-sections of the general staff, namely, the sub-section controlled by the adjutant-general (*Dejurni General*). The medical administration retained, however, under the adjutant-general its two administrative heads, namely, the director of hospitals, a combatant officer of general's rank, and the director of

medical services, a medical officer of highest rank. The former had charge of the economical and disciplinary administration, the latter of the professional or technical administration. Each director had his own staff, the medical director having as his assistants a senior physician, surgeon and apothecary, and each had to remain with the head-quarter staff and direct from there the work of the medical service in the field. A principal medical officer was attached to the headquarter staff of each army corps and of each division, and three classes of field hospital were organized, (1) ambulances or "transport hospitals," as they were called; (2) mobile hospitals; and (3) temporary general hospitals.

The "transport hospitals" were composed of wagons with stretchers, blankets, bedding, instruments, restoratives and medical comforts, intended to bring first aid to the wounded and remove them to the mobile hospitals. Each had hospital attendants amongst other personnel. They belonged to no definite tactical unit, but were sent wherever they might be wanted. The mobile hospitals belonged to army corps, but their number was determined by the requirements of each campaign. They were opened in echelon, in accordance with the orders of the commander-in-chief, as independent units behind the wings and centre of the army, and could be packed up and moved wherever they might be required. The temporary general hospitals were established in the territory behind that occupied by the mobile hospitals; they were army units and were designated by consecutive numbers.

In estimating hospital requirements accommodation for 10 per cent. of the strength of the army was provided for, and one physician or surgeon, with 6 surgical pupils each, was allowed to every 200 patients, one hospital assistant or *feldsher* to every 100 patients, and 1 hospital attendant to every 10 patients.

The customary dual control was exercised in the field hospitals just as in the permanent hospitals. A military commissary had economical control, a medical officer, either the army corps or divisional principal medical officer, professional control. The latter was assisted by 1 or 2 surgeons, surgical pupils, an apothecary, hospital orderlies and a chaplain for each hospital.

The regimental medical service was liberally provided with medical officers and *feldshers*, an infantry regiment for

example having 1 senior and 2 junior medical officers and 3 or more *feldshers*.

In addition to the field hospitals a depot of medical and surgical stores, with a staff of apothecaries and divisible into sections for mobility, was included in the field medical organization of the period during and following the Napoleonic wars.

The German and Austrian writers recognize in the above organization practically all that could be wanted for the care of sick and wounded in the campaigns of the period, but state that when put to the test during 1805-1815 the Russian medical service was no better off in the field than that of other European armies at the time, notwithstanding the fact that the scheme was excellent and in advance of other military medical organizations. This failure to effect its purpose was attributed partly to the complicated nature of the administration, partly to the fact that the army generally had not yet learnt or become accustomed to the new organization, and partly to difficulty in obtaining medical personnel to complete hospital and regimental establishments.

In the Turkish war of 1828-29 no changes appear to have been made and the chief reference to the military medical service then is the enormous number of casualties which occurred amongst the medical personnel. More than 300 medical officers fell victims to plague.

In 1833 a form of army medical regulations, which had to be in the possession of each medical officer, was issued, and in 1835 and subsequent years of the reign of Nicholas I, a complete re-organization of the army administration, affecting the medical organization both in peace and war, was made. The War Office was organized in 13 sections, the 11th of which was the medical section. The director-general, however, of the army medical service, or chief medical inspector as he was called, was attached to the 1st section, or grand staff of the Emperor, and the officer who performed the functions of military director of hospitals, to the 13th section or war minister's central office. The head of the medical section was merely director or chief of a section, and not director-general of the army medical service. He was charged with all questions affecting the health of the troops, and with the supply of medical, surgical, dispensary and nursing personnel and material for the regimental units and hospitals.

The director of military hospitals, who came directly under the war minister, performed the duties of inspecting hospitals, and was present at all meetings of the quarter-master general's section, when it dealt with hospital matters. The chief medical inspector or real director general of the army medical service was nominated personally by the Tsar; he had his own office, and had two medical officers, and several officials and clerks to assist him. His chief concern was to maintain a high standard of professional knowledge throughout the medical service, to give it, in other words, life. Returns of sick were sent to him regularly, he inspected hospitals and submitted proposals for rewards. He was also obliged to examine officers of the guard applying for leave to undergo a cure at health resorts, and wounded officers claiming lodging allowance in St. Petersburg. He nominated professors to the educational establishments and selected medical officers for the higher or more important appointments. In the field, he accompanied the field army, was directly under the orders of the commander-in-chief, and had to undertake all the duties of a director of medical services.

The garrison and field medical establishments were also re-organized.

In peace two classes of hospital were recognized, the permanent or fully equipped, and the regimental.

The permanent hospitals were divided into six classes, according to the number of beds, as follows:—

Class 1	with	100	ordinary	beds,	50	reserve	and	10	officers' beds
" 2	"	250	"	50	"	10	"	"	"
" 3	"	500	"	100	"	10•	"	"	"
" 4	"	1000	"	200	"	20	"	"	"
" 5	"	1500	"	300	"	40	"	"	"
" 6	"	2000	"	500	"	50	"	"	"

In some hospitals, special sections were formed for the treatment of soldiers' wives and children. Hospitals with less than 100 beds were called half hospitals, a term which still exists for the smaller class of hospitals in Russia.

The dual control of hospitals was continued, a hospital inspector (*smotritel*) having economical and disciplinary control and a medical officer professional control.

The regimental hospitals were called *lazarets* and were for slighter cases of sickness and injury. They were maintained

regimentally by a sum of money levied on each soldier on the strength, about 2 to 4 shillings annually, and half the pay and rations of each man admitted to the hospital.

The number of beds in a regimental hospital varied according to the number of battalions and arm of the service. Regiments of 4 battalions had 112 beds, a single battalion 24, cavalry regiments had from 29 to 56 beds, and artillery batteries 5 to 8 beds.

The field medical organization introduced at this period was that which the Russians had at the beginning of the Crimean War.

For field service three kinds of hospitals were organized; (1) mobile hospitals, (2) field hospitals, and (3) lines of communication hospitals.

The mobile hospitals performed the functions of the modern field ambulance, their duty being to follow the troops, take charge of men suffering from overfatigue and unfit to march in the ranks, and, during battle, afford first-aid to wounded and convey them to the nearest field hospital. The number of mobile hospitals was one for each army corps and one, divisible into two sections, with army headquarters. A mobile field hospital was under the customary dual command, namely, that of a senior medical officer and a hospital inspector or *smotritel*. During battle the latter had charge of the duties of collecting the wounded.

The field hospitals were arranged to work in three echelons; the first echelon was for the reception of sick and wounded of all kinds from the mobile hospitals, the second only for serious cases and cases requiring prolonged treatment who were passed on to it from the first echelon, and the third was an echelon of field hospitals at the base of operations. These echelons of field hospitals formed an organization, which has since developed in other armies into the modern organization of clearing hospitals.

The lines of communication hospitals were hospitals established according to requirements at places where sick and wounded increased to such an extent that the mobile and field hospitals were unable to deal with them.

The regimental medical service retained very much its original character. A regimental staff surgeon was in charge, and all medical personnel, namely, battalion surgeons, apothecaries, *feldshers*, sick attendants, and nursing orderlies

were directly under him, he himself being responsible to the regimental commander, except in matters of purely professional practice, when he came under the administrative medical authority of the army corps.

This administrative medical authority was of the nature of an administrative committee. For example, an army in the field had such a committee attached to the general staff of the army. The president was the adjutant-general (*Dejurni General*) and the other members were the director of hospitals, the principal medical officer of the field forces, the director of supplies, the chief commissariat officer, an inspector of medical and surgical supplies, the assistant to the principal medical officer, and the senior hospital inspector. The director of hospitals was a general officer; the senior hospital inspector (*smotritel*) was his assistant. He acted as president in the absence of the adjutant-general. The quartermaster-general, chief engineer and intendant-general of the army could be added to the committee when required.

This committee had amongst other duties to make all the necessary preparations for the medical services before the outbreak of war, including the training of medical personnel.

The direction of medical services in each army corps was similarly organized under the presidency of the chief of the staff or some other officer of general's rank, with the assistant or deputy adjutant general, the principal medical officer of the corps, and the representatives of the director of supplies and chief commissariat officer as members.

Notwithstanding the somewhat complete organization of mobile and field hospitals under the above scheme, the medical service broke down during the Crimean war in a way which has been vividly described and analyzed by such writers as the eminent Russian surgeon Pirogoff,* Prof. v. Hubbenet† of Kiev University, and Lt.-Colonel Hasenkampf‡ of the General Staff in lectures delivered at the Military Academy in St. Petersburg in 1870-71. The causes of failure have also been analyzed by Knorr, in Germany, and Myrdacz, in Austria. They are summarized by the latter as follows:—

* “Grundzüge der allgemeinen Kriegs-Chirurgie.” Leipzig, 1864.

† “Die Sanitätsverhältnisse der russischen Verwundeten während des Krimkrieges.” Berlin, 1871.

‡ “Vorträge über das Militärsanitätswesen im Falle eines Krieges,” etc. Translated into German by Dr. J. Grimm.

1. There were no reserves of any kind, who could be trained in peace and who would be available for the formation of new units and for replenishing wastage. This was especially felt in the case of the medical officers and *feldshers*. Such a reserve, says Myrdacz, can only be obtained in Russia, as everywhere else, by a system of general military service. §
2. The number and size of the field medical units were determined only on the outbreak of war, and nothing was kept ready in time of peace. Added to this, units could only be got ready and equipped by the co-operation of three different military departments, a condition of affairs which led to much delay in meeting with the increasing demands of the army.
3. There was a system of dual control in military medical administration and in command of medical units. Medical officers had no independent power of directing their own units, and were in constant conflict with the authority who had economical control and who was unable to understand the professional aspects of the medical officer's requirements.
4. There was bureaucratic centralization throughout the whole army administration, and compliance with demands was delayed by clerks quibbling on paper over minor points, when there was urgent need for immediate action.

It is unnecessary to enter into details of the medical conditions which actually existed during the Crimean war on the Russian side. The roads, weather and means of evacuation were bad and the greatest possible distress prevailed with a very high percentage of mortality from disease, in consequence of the impossibility of getting the sick and wounded away from the areas occupied by the troops, and on account of the rapid exhaustion of resources in that area. According

§ It may be mentioned here that 354 medical officers out of 2,839 died during the war, (only 5 from wounds), and 1,664 out of 3,759 *feldshers* or *feldsher* pupils, equal in the latter to a loss by death of 40 per cent. Of the medical officers 700 were young medical students, and 30 per cent. of their number died.

to Knorr, notwithstanding the rough means of transport and the trying journeys over long distances over the steppes into the interior of Russia, evacuation was a blessing, as compared with the conditions which existed in Sebastopol and Simferopol, an advanced depot, where the largest number of wounded were collected.

The experiences of the Crimean War and of the European wars which succeeded it in 1859, 1866 and 1870-71 led to radical changes in the Russian army as a whole and in Russian national life. Serfdom was abolished and a system of national service was introduced, at first incomplete, because it admitted payment of substitutes, but later on carried out in its entirety when, in 1874, the concession as to payment of substitutes was abolished.

The re-organization of the army, when national service was first introduced, commenced in 1862 and lasted till 1869, but previously to this, in 1857, the army medical officers were formed into a corps of officials with the relative rank of officers graded in 6 classes of official rank. The reform was carried out by Enochin, then body physician to the Tsar; he had had experience of the Crimean War, and felt personally the necessity of recognised official rank.

In the re-organization of the army in 1869 and 1874, the empire was divided into 15 military districts and the army organized into 14 army corps, (increased to 16 in 1876), 15 independent infantry divisions and 2 independent cavalry divisions. The staff of an army was divided into 5 sections and 4 sub-sections, together with 6 auxiliary sections. The latter were under the chief of the staff, one of them being an auxiliary section for hospital administration and another for professional medical administration.

The central medical authority at the War Office was exercised by the medical department, which was an independent department of its own under a medical director-general. He had a technical scientific committee or advisory medical board, and a military hospital committee, similar in constitution to the British Army Sanitary Committee, to help him in questions of a scientific nature and of army medical administration.

The army medical college was also placed directly under the director general of the army medical service, and had the same rights as, and more privileges than, the medical faculties

of universities. It granted the degrees of doctor of medicine and master in veterinary science and in pharmacy. Students who went through their curriculum as stipendiaries of the State were obliged to serve 13 years in the army, others 8 years. The course of study was 5 years, followed by 2 years' practical work in hospitals, after which time students were obliged to take their doctor's degree and at the end of a third year present a thesis. The six highest on the list were given a money reward of £100 approximately and were sent to study for two years at foreign schools at the expense of the State. For each year of such study, two extra years' military service had to be given. This comprehensive curriculum and the privileges associated with study at the army medical school made it the first medical school in the empire and it attracted the best class of medical students, a fact which explains the importance of its position in St. Petersburg at the present day. In 1881 an alteration was made in the curriculum by which the first 2 years of study should be spent at some other medical, veterinary or scientific school and other conditions were also introduced then; but, owing to the failure of the other medical schools to produce the number of medical students required, the conditions previous to 1881 were restored ten years later.

In the military districts, a district medical administration, with a medical officer at its head with the title and functions of district medical inspector, was established. Included in this administration was a combatant officer as district inspector of military hospitals. The district medical inspector had a staff of 1 assistant medical officer and 1 pharmacist, a veterinary surgeon, and clerical personnel.

Each army corps and each division were given in peace principal medical officers for administrative duties.

The regimental medical service remained much the same as before, on the principle of 1 senior regimental medical officer on the regimental staff and 1 junior medical officer for each battalion, together with company *feldshers*. In each battalion 6 *feldsher* pupils had always to be available as a reserve.

Military hospitals were divided into 4 classes instead of into 6 as in the organization effected by the Tsar Nicolas I after 1835. The 1st or smallest class of hospital had five beds for officers and 150 for men, with 2 reserve beds for the former,

and 50 for the latter. The other classes in order had 10, 30, and 40 officers', and 300, 500, and 800 men's, 5, 15, and 20 officers' reserve, and 100, 150, and 300 men's reserve beds. The principle of having reserve beds, it may be noted, was intended to provide means of expanding the accommodation in case of war. The expression "half hospital" continued to be applied to hospitals with less than 100 beds.

The command of military hospitals was exercised by a combatant officer, as hospital commandant. A hospital committee under him dealt with all general and disciplinary matters, the senior medical officer with purely technical professional matters, and a *smotritel* with interior economy. The personnel of hospitals was also systematized. A "half hospital" had 2 medical officers and 50 other personnel, No. 1 class 4 medical officers and 90 other personnel, No. 2, 3, and 4 class, 7, 10 and 16 medical officers and 134, 182 and 278 other personnel respectively. Nursing sisters, in the proportion of 1 to every hundred patients, were also employed. The proportion of personnel to patients generally was 1 to 1.9 or 2.7, with a medical officer for every fifty, and a sick attendant for every 15 sick. The number of military hospitals established in Russia after this re-organization was 15 half hospitals, 28 of No. 1 Class, 20 of No. 2 Class, 5 of No. 3 Class, and 4 of No. 4 Class, or 72 in all, with hospital accommodation approximately for 650 officers and 17,400 men, and reserve accommodation for 311 officers and 5,350 men.

A thorough re-organization of the field medical service was also made in 1869. It is the basis of the existing field organization and consisted of (1) mobile medical units, (2) medical units mobile only until they became established in localities behind the field force, (3) fixed establishments, and (4) reserves of personnel and equipment.

The mobile medical units were the regimental *lazarets* or ambulances accompanying regimental units, and the divisional *lazarets* or field ambulances. The former were units with complete hospital equipment for 36 beds in each infantry regiment and 12 in each cavalry regiment, independent battalion or artillery brigade. Their duties were to take the sick with them on the march, to re-inforce dressing stations or form independent regimental dressing stations during battle, and to establish local regimental hospitals during halts for longer periods.

The divisional *lazarets* were organized to receive 6 officers and 160 men each, to evacuate those fit for transport and to treat on the battle field the seriously wounded, until relieved by clearing hospitals.

These divisional *lazarets* were not integral parts of a division but two or more were assigned to a division or removed from it as thought fit by the commander-in-chief. Twenty-four were equipped at the time of re-organization, the total number contemplated for the army being forty-seven.

The units, which were kept mobile until opened behind the field army, were the clearing hospitals. They were army units and could be used not only for clearing the divisional *lazarets* but also for hospital purposes in any locality where they might be required, remaining there after the war was over, if necessary. Each of these hospitals was equipped for 30 officers and 600 men, and was divisible into 3 independent sections of 210 beds each, being thus the equivalent of the present field hospital and mobile reserve hospital of the Austro-Hungarian army. The number provided for was 84, of which 48 were given full transport equipment.

The fixed hospitals consisted of the permanent military hospitals, and their reserves for expansion. New hospitals could be established on the lines of communication as required, but they were not reckoned in the number of beds for which provision was made. This was estimated at 1 bed for every 8 men on the strength of the field forces and included the beds in the clearing hospitals, and other field medical units.

The reserves of personnel and equipment consisted of a hospital reserve personnel, field dispensaries, which mobilized at fixed places, went from there to the base, and were distributed to wherever they might be required, and an equipment of surgical instruments. All other material and equipment were obtained by the medical units from intendance stores.

The direction of the field medical service was exercised under the chief of the staff of an army by a director of medical services and a director of hospitals, the former a medical, the latter a combatant officer. Similar dual control was continued throughout all other branches of medical administration in the field, with the exception of the divisional *lazarets*, in which the senior medical officer had independent control. With this exception the work of field medical units and fixed establishments was controlled by a senior medical officer and by a

hospital inspector, both of whom were under a military officer, who was the hospital commandant.

Generally speaking, the re-organization of the army in 1869 provided in European Russia for a field force at war strength of 1,213,200. For these the regimental *lazarets* provided 7,580 beds, the 47 divisional *lazarets* 7,802, the 84 clearing hospitals 52,920, or over 68,302 equipped beds in mobile units.

The number of medical officers for war establishments was 3,200, a number which had to be made up by employing civil practitioners.* The other personnel for medical services in the field were the officers and officials† commanding and controlling the economical administration of hospitals, pharmacists and *feldshers*, stretcher-bearers, subordinate officials and transport personnel. The *feldshers* were the most important class of all. They corresponded to the subordinate medical service in India, and numbered on war establishments 7,000 for regimental units, 800 for divisional *lazarets*, 2,000 for clearing hospitals. Stretcher-bearers were attached only to the divisional *lazarets*; they formed bearer-companies with a strength of 209. Omitting medical officers and pharmacists, 52,100 persons in round numbers were required for the medical service of the regimental and field medical units. This large provision of medical personnel with the Russian field army has been subsequently noted by several writers and observers during the recent campaign in Manchuria in 1904-5.

The medical service was also liberally provided with transport material. For European Russia alone, according to Myrdacz, there were 950 ambulance and 800 material wagons with 6,300 horses and 1,200 drivers for the medical service of regimental units, 1,400 ambulance and 750 material wagons with 10,480 horses and 5,300 drivers for the divisional *lazarets*, and 2,700 material wagons, 9,600 horses and 5,000 drivers for the clearing hospitals, or a total of 2,350 ambulance wagons, 4,250 material wagons, 26,380 horses and 11,500 drivers with the medical services of the field army. ‡

* According to Myrdacz the number of civil practitioners in private and independent practice in Russia at this time was only 4,606. The remaining 7,210 qualified medical men were in civil or military state employment.

† Officers, officials and subordinate officials were trained in peace for duties in connexion with medical units in war, a number of officers, officials, n.c.o's. and others being appointed annually from regiments to do duty in military hospitals for one year, afterwards returning to their regiments.

‡ Two kinds of ambulance wagons were used. A light wagon for 4 lying down and 1 sitting, and a heavier wagon to carry 4 lying down or 8 sitting. A divisional *lazaret* had 6 light and 24 heavy wagons; the regimental *lazaret* had heavy wagons only.

Material for the medical service was kept ready in peace. The surgical dressings of all the medical units, and the whole equipment and transport of the clearing hospitals, were held ready in 6 intendance districts at St. Petersburg, Moscow, Kreinencug, Düna-burg, Warsaw and Kiev; the drugs and dispensary equipment and transport material of field dispensaries, (depots of medical stores), were in the 9 medical stores of the country; the surgical instruments in the army medical factory of instruments in St. Petersburg: the equipment and transport of the divisional *lazarets* were partly at divisional headquarters and partly with regimental *lazarets*; and the equipment and transport of regimental *lazarets* were with their regiments.

Mobilization regulations were drawn up for this somewhat complicated distribution of the material, transport and personnel of field units, similar to the regulations which exist in connexion with the mobilization of the British field medical units.

Other material of a special character, for which provision was made at this period, consisted of hospital tents. A divisional *lazaret* carried with it 12 tents of different sizes. Two were large tents capable of holding 50 wounded each. Eight were ordinary military tents for 20 patients each, and 2 were officers' tents for 3 patients each. Six wagons were required for their transport.

The food and drinkables carried in a divisional *lazaret* was for the normal accommodation of 166 patients for six days. The amount of material for dressings was calculated for 21,168 dressings. Drugs and surgical apparatus, etc. were calculated on a four months' expenditure for the normal number of 166 patients.

The regulations of this period also laid down the general system of removing wounded from the battlefield. All the arrangements were in the hands of the field inspector of hospitals, the divisional principal medical officers directing the work at the dressing stations, of which three echelons were opened, the most advanced for rendering first aid, the next for applying more extensive apparatus and for urgent operations, and the furthest back, out of the zone of all fire, as a central collecting point previous to sending the wounded to the clearing hospitals. The field inspector determined the places where these dressing stations should be opened and made the

local arrangements for them. He also directed the work of evacuation, prepared transport material and so on. As a rule the light ambulance wagons were used for the transport of wounded to the dressing stations, and the heavy wagons for their transport to the clearing hospitals.

Since this comprehensive organization of a field medical service in 1869, no material changes have been made in the Russian army medical service.

In 1877-78 Russia waged war against Turkey and it was expected that so complete a field medical organization would have proved invaluable. Failure, however, similar to that connected with the medical arrangements in the Crimean war, was the result. Knorr* attributes this generally to the Russian methods of administration and dual control, by which there are two independent branches of hospital control under two chiefs; and also to the complete failure to organize a line of communication service at the beginning of the war, although, as Myrdacz remarks, "the immense importance of this was clear as noonday, as was proved by the Franco-German war."

From 1882 onwards the system of having large military hospitals in peace was gradually changed to a system of local or garrison hospitals, which were placed under the command of the commanding officer of the station, thus doing away with the special hospital committees, which controlled the military hospitals. The new system had also the advantage of reducing the size of hospitals to suit local requirements. Economy in personnel was thus effected, the proportion being 1 for every 3 or 4 patients instead of 1 for 1·9 to 2·7.

Some changes were subsequently made, notably in 1886, when the medical officers were deprived of command of medical personnel, the whole personnel of the hospitals, medical as well as administrative, being placed under the hospital commandant.

Other changes were changes such as took place, during the last two decades, in the medical services of all armies, in consequence of the advances in technical knowledge and science. As regards general principles, the 1869 regulations have remained in force and are the basis of the present organization. Although changes are being made, in

* "Das russische Heeres Sanitätswesen während des Feldzuges, 1877/78"; by E. Knorr. Hannover, 1883.

consequence of the lessons of the Manchurian campaign, full effect has not yet been given to the recommendations of a committee which met to consider questions of improving the army medical service, under the presidency of General Trepov, who was director of hospitals in Kuropatkin's army during the war.

CHAPTER II.*

THE MEDICAL SERVICE IN TIME OF PEACE.

GENERAL MILITARY ORGANIZATION.

Universal military or naval service constitutes the basis of the general system. The Mohammedan native Caucasian population, the non-Russian population of Turkestan and of the Littoral and Amur districts, Samoyeds of the Archangel Government and some tribes in the Astrakhan and Stavropol Governments are excluded from ordinary service. Cossacks serve under special regulations. In Finland the law fixing compulsory, but not general, service is at present suspended, Finland paying a contribution in money instead of furnishing recruits.

Excepting those above-mentioned, male Russian subjects are liable to personal military service from the beginning of the twenty-first to the end of the forty-third year of age. Of this period, men taken for the annual contingent pass 17 or 18 years in the standing army, and the remainder in the Imperial Militia (*opolchenie*). Service with the colours is for three years in the infantry and field and mountain artillery, and for four years in other arms or services. Reserve service is for 15 years in the case of those who have served three years with the colours, 13 years for those who have served four years. The Reserve is divided into two classes, service in the first class being for seven years, in the second for the remaining period of reserve service.

*The greater part of Chapter II., Chapter III. and Appendices has been adapted from material prepared by Major G. S. McLoughlin, D.S.O., Royal Army Medical Corps.

All men fit to bear arms, of military age but not serving in the standing army, belong to the Imperial Militia, which is divided into two Bans. The 1st Ban includes men who have served in the standing army and those who have not been taken for annual contingents but are fit for active service. The 2nd Ban consists of men freed from service in peace for family reasons and of men not quite fit for active service.

Cossack service begins on the completion of the twentieth year of age and lasts for 18 years. It is divided into three periods. In the preparatory period men are trained for one year in their *stanitsas* or settlements. They then serve in the "Front Category" for 12 years. The last five years of a Cossack's service are spent in the "Reserve Category." Only the first four years' service in the "Front Category" corresponds with colour service in the ordinary sense; the remaining term in this category is spent on furlough, except during certain trainings. All Cossacks fit to bear arms, up to any age, may be called on to serve in the *levée en masse*.

Territorial recruitment of troops permanently stationed in a district is not an essential part of the Russian military system; nationalities are distributed, Jews being excluded from certain branches of the service.

Certain classes of the community are exempt from compulsory service with the colours in peace. The medical profession is so exempt, but a member may be liable for service by the statutes of the institution in which he has been educated. If a man belonging to one of these classes draws a number incurring service with the standing army he may pass at once into the reserve for 18 years.

Certain reductions and postponements of service are allowed to students and others, under definite rules.

Volunteering for service with the colours and extension of colour service are permitted and regulated, certain privileges being entailed. Volunteers serve actively for one or two years and may then pass to the reserve, in which they remain 12 years. Medical men, veterinary surgeons and pharmacists who volunteer are, if accepted, allowed to serve as such.

The orders of the Emperor to his land forces are carried into effect through the War Ministry, at the head of which is the War Minister. Among the several departments of the War Ministry are: the Chancery of the War Minister, the

Military Council, the Headquarter Departments, viz., the General Staff, the Headquarter Staff, and the Artillery, Engineer, Intendance, Medical, Cossack, Military Education, and Military Justice Departments, and the Supreme Court of Military Appeal. The War Ministry also includes the Imperial Headquarters. The Military Council, under the presidency of the War Minister, is the supreme body for deciding questions of a legislative or economic nature. The General Staff deals with military operations and matters directly affecting them, while the Headquarter Staff deals with matters of a routine nature. The headquarter administration of the intendance deals with intendance services, *i.e.*, commissariat, supply of clothing and equipment, and pay.

For purposes of military administration, the territory of the empire is divided into many "circles," which are comprised in the 12 military districts:—St. Petersburg, Vilna, Warsaw, Kiev, Odessa, Moscow, Kazan, the Caucasian district, Turkestan, Omsk, Irkutsk, and the Pri-Amur district, and one separate province, that of the Don territory. In each district there is a commander-in-chief, who has control of the army corps and other troops or military establishments within the district.

Military units are classified as field, reserve, depot, fortress, and local units. Field units exist as such in peace and are brought up to war strength by 1st class reservists. Reserve units exist in peace only as cadres and are filled up by reservists on mobilization. Units of the 1st class of reserves have stronger cadres and are more readily mobilized, and are used in war in the same manner as field units. Units of the 2nd class reserves are used on lines of communication. Depot units serve to keep the units of a field army up to strength in time of war, the cadres being filled up by reservists not required on the mobilization of units, by recruits, or by men of the four youngest classes of the imperial militia. Fortress units are detailed for the defence of fortresses: they exist in peace and are expanded in time of war by reservists in the same way as reserve units. Local units are used for garrison work in certain localities; if their establishment is not the same in war as in peace, the difference is made up by reservists.

Imperial militia units are not included in the above classification. These would be formed only in case of grave national emergency. The medical arrangements for such units are not complete.

The normal infantry administrative unit is the regiment of four battalions, each of four companies. The total war strength of a regiment of this type may be taken as 4,127. Certain regiments, notably certain rifle regiments, have two battalions only, and independent battalions also exist.

The normal administrative unit of cavalry is either the 6-squadron regiment of the dragoon type, which includes uhlans and hussars as well as dragoons, or the 6-*sotnya** regiment of Cossack cavalry. The war strength of the former is 1,022, of the latter variable; a Don Cossack line regiment, for example, has a war strength of 976.

As regards units of mobile artillery, the battery, the division of 2 or 3 batteries, and the brigade of 2 or 3 divisions, may each be an administrative unit, as may also be the park for supply of warlike material or the park brigade of 3 parks. War strengths of batteries and parks may be taken to be as follows:—field battery, 318; horse battery, 204, Cossack horse battery, from 213 to 300; park field artillery, 355. The normal brigade of field artillery consists of six batteries, and a brigade staff. Horse artillery divisions are not formed into brigades, except in the Guard.

Units of which the strength is given above, as well as some others, are for the most part permanently organized into higher tactical units. Two infantry 4-battalion regiments and a small staff form an infantry brigade; two infantry brigades, 1 field artillery brigade, 1 artillery park brigade, and a divisional train, with divisional staff form an infantry division having a war strength of 20,491.

An independent infantry brigade such as a rifle brigade of the line, includes, in addition to staff, four 2-battalion rifle regiments, a "light" field artillery division, a park, and a brigade train, and has a war strength of 9,851.

A cavalry brigade comprises a staff and two regiments with a war strength of 2,048. A cavalry division comprises a staff, two cavalry brigades and a horse artillery division with a war strength of 4,532. Such a division would include 1 dragoon, 1 uhlan, 1 hussar and 1 Cossack regiment. Special Cossack divisions are also formed. The composition of a cavalry corps is not laid down.

A normal army corps contains a corps staff, 2 infantry

* *Sotnya* is the term used for the "squadron" of Cossack cavalry.

divisions, 1 cavalry division, 1 sapper battalion, 1 corps section of an engineer field park, and 1 corps supply column. A Russian army corps is not to be regarded as an indivisible unit; in the field it is often split up.

A field force, if large enough, is divided into a number of armies, each of four or five army corps, with army troops and, probably, troops for lines of communication.

The garrison of a fortress has its own permanent and independent organization.

All persons in the Russian army who occupy appointments comparable with those of officers in the British army are officials (*chinovniki*), i.e. each is included in one of the successive "classes" of official rank by which government servants, who, as a body, have a definite position in the general community and wear a uniform, are graded. Among officials serving under the War Ministry the Russian officer (*ofitser*) is the equivalent as nearly as possible of the combatant officer of the British army, and belongs to the dominant class. The appellation of "officer" is not applied to the non-combatant official, but in army organization the grade of official relative rank is observed, and officials do not, under ordinary conditions, serve under those junior to themselves in this official rank. An official who is not an officer may nevertheless receive, by virtue of the appointment he holds, disciplinary and other powers pertaining to command, and his command may include combatants, both officers and subordinate ranks.

The ranks of officers are :—

(a) *Generali* (General Officers).

Official class.

- | | | |
|--|-----|---------------------------|
| I. <i>General-Feldmarshal</i> | ... | (Field Marshal). |
| II. <i>Polni General</i> | ... | (General). |
| III. <i>General-Leitnant</i> | ... | (Lieutenant-General). |
| IV. <i>General-Maior</i> | ... | (Major-General). |
| (b) <i>Shtabs-Ofitseri</i> (Field officers). | | |
| VI. <i>Polkovnik</i> | ... | (Colonel). |
| VII. <i>Podpolkovnik</i> | ... | (Lieutenant-Colonel). |
| (c) <i>Ober-Ofitseri</i> (Company officers). | | |
| VIII. <i>Kapitan</i> | ... | (Captain). |
| IX. <i>Shtabs-kapitan</i> | ... | (2nd Captain). |
| X. <i>Poruchik</i> | ... | (Lieutenant). |
| XII. <i>Podporuchik</i> | ... | (2nd Lieutenant). |
| XIII. <i>Praporshchik</i> | ... | (Ensign in Reserve only). |

In cavalry and Cossacks certain grades have special names.

The military officials, who are not "officers" but who belong to the official classes in which officers are included, are the chaplains, the medical officers, veterinary surgeons, pharmacists, accountants or quartermasters, auditors, bandmasters, and certain officials of the intendance, artillery, engineer, educational and regimental establishments.

The lower military grades are the *feldfebel*, who may be described as a company serjeant-major, and the *unter-ofitser* who may be described as a non-commissioned officer, and who is the immediate superior of the rank and file. The non-commissioned officers are of two grades, "senior" and "junior." A *kaptenarmus* is the name given to the quarter-master serjeant or non-commissioned officer in charge of stores, but the term does not designate a grade. The special designation of a lance-corporal is *yefreitor*.*

The term *ryadovoi* is used to designate private soldiers, but may also be used for the rank and file generally including the lance-corporals.

Non-combatants have grades relative to the above-mentioned with designations which refer to the special duties of their grades.

The regimental units include in their establishments a large personnel for non-combatant duties. Whenever convenient, if the interior organization of the unit permits, a non-combatant company or detachment is formed in the unit. An infantry regiment, for example, in addition to the companies included in battalions, forms a non-combatant company under the command of a 2nd captain. This officer has under him, as N.C.O's of the company, a *feldfebel*, the regimental *kaptenarmusi* and transport under-officer. Other persons who are comprised in the company are (a) clerks, (b) subordinate medical personnel, (c) armourers and other tradesmen employed as such, (d) subordinate veterinary personnel, and (e) transport men, each section being under men of their own class of a higher grade than rank and file.

A similar organization exists in the form of non-combatant "detachments" in the case of smaller units, the non-commissioned officer of the transport section taking the place of the *feldfebel*. In the cavalry, farriers

* The German "*Gefreiter*."

form another section under the senior farrier. Non-combatant companies and detachments are administered as regards discipline and interior economy similarly to a combatant company. The individual members are also subject to any disciplinary power possessed by officers or officials under whom they perform their special duties. The non-combatant company or detachment is a peace formation and is broken up on mobilization.

GENERAL ORGANIZATION OF THE MEDICAL SERVICE.

The army medical service as a whole includes also the veterinary service, and this association of the medical and veterinary services is due chiefly to convenience of administration and supply of technical stores, interchange of duties being also, to a very slight extent, practicable. The medical service proper is, however, the dominant factor, and forms the greater part of what is called the army medical service. There is no special army medical corps as in other armies. The purely medical personnel merely forms the permanent and professional element in a service which includes a heterogenous personnel temporarily detached from combatant units and other branches of the army. The whole forms an organization which has not even a distinctive name and is in no sense an autonomous service in peace, although it is practically an autonomous organization in war. It may be said generally that the organization of the Russian medical service is essentially based on what is commonly known as the "regimental system." This ancient system has been adapted to modern uses, although its adaptation has made the medical organization extremely complicated.

The medical service is thus composed of (1) a military medical personnel, (2) a military non-medical personnel, and (3) personnel from civil sources, the various elements being as follows:—

(1) Military medical personnel:—

(a) Medical officials.

(b) Pharmacists.

(c) Subordinate medical personnel:—

(i) *Feldshers*.

(ii) *Nadzirateli*.

(2) Military non-medical personnel:—

(d) Officers, non-commissioned officers and rank and file of combatant units.

(e) Persons of official rank and other non-combatants.

(3) Purely civil personnel:—

(g) Female nurses.

(h) Civilian doctors.

(i) Other civil personnel for various duties.

(a) *Medical Officials.*

These are all fully-qualified medical men. They are the dominant element in the purely medical personnel of the army. The generic Russian name for a medical official is *vrach*, a word which is the equivalent of the old title of surgeon in the army medical department of the British army. Surgeons, however, in the Russian army have no personal military titles, but are distinguished by the appointments which they hold, and the official terms used in connexion with them. They are classified in six successively numbered medical grades, which correspond as follows with the classes of official rank:—

Medical Grade.				Class of Official Rank.	
1st	IV.
2nd and 3rd	V.
4th	VI.
5th	VII. and VIII.
6th	IX.

Independently of appointments there are no fixed establishments according to these ranks or grades.* The director-general of the army medical department is not included in these grades. He acts under special conditions as the head of a department of the War Ministry. In class IV. are included the army medical inspectors of military districts. In the other classes of official rank there are medical officials holding appointments of extreme variety, and, as it is the appointment which carries the rank, these ranks are more conveniently noted later on in describing the various appointments and duties of the medical officials.

* The fixed establishment for all grades in 1907 was 3758, the actual number serving 3229.

The holding of official rank by medical officials carries with it certain personal titles, honorific prefixes and social grades; these are merely civil privileges, but they are used officially. For example the following titles, in order from lowest to highest, are held by medical officials of the various classes of official rank.*

Class	IX.	Collegiate Assessor	...	(<i>Kollejski Assesor</i>).
	VIII.	Collegiate Councillor	...	(<i>Kollejski Sovetnik</i>).
	VII.	Court Councillor	...	(<i>Nadvorni Sovetnik</i>).
	VI.	State Councillor	...	(<i>Statski Sovetnik</i>).
	V.	Actual State Councillor	...	(<i>Dyeistvitelni Statski Sovetnik</i>).
	IV.	Privy Councillor	...	(<i>Taini Sovetnik</i>).

First Appointment and Conditions of Service.

Persons desirous of appointment as military surgeons must have completed the authorized courses of study at Russian universities or at the military medical academy and be qualified medical graduates. The academical standing of an individual determines the class of rank of which he, on appointment, receives the prerogatives: those who possess only the minor degree of *lekar*, which confers somewhat restricted rights as to practice, belong to Class IX: those who possess the higher degrees of "Doctor of Medicine" or "Doctor of Medicine and Surgery" belong to Class VIII; they receive, in fact, a species of brevet rank.†

All appointments are made to fill vacancies as they occur. Appointments to those posts of "junior" surgeons of regiments and military medical establishments in the cities of St. Petersburg, Moscow, Kiev, Warsaw, Odessa, Kharkov, Kazan, Riga, Vilna and Tiflis, which are announced as vacant in August, September and October, are reserved for those who

* Some of the titles are of the nature of rewards and it is possible for an official to belong for example to Class VII and not have the title of Court Councillor.

† The total number of Army Medical Officers is about 3,500. It is stated that few qualified medical men are entering the army medical service as a career, and that, in 1907, the service was more than 500 below establishment. General Trepov's Committee referred to on page 25, recommended amongst other things that the medical officials should be formed into a military corps, with disciplinary powers, with better pay, with the same pensions as other officers, and with the same insignia of rank; also that a weekly army medical journal should be published.

have satisfactorily completed the course at the military medical academy.

When an application from any qualified medical man has been received, it is considered as a rule by the Director General, who, if the applicant has been found fit for service, has taken the prescribed oath and has made the declarations which are usual in Russia concerning masonic lodges and other secret societies, appoints him to a definite post.

In addition to the medical officials who serve in the army as a career, there are medical officials who serve, under the law of general service, either as volunteers, thereby reducing the total period of their liability to service, or simply as medical men "taken for service." The great majority of the reserve belongs to the latter class. In time of peace this does not involve colour service even if a number for service in the active army has been drawn. If the medical man does not wish to serve in the active army, he simply passes the 18 years of his military service in the reserve. Most medical men in Russia in fact, who are physically fit, are thus in the reserve, unless they are actively serving. A small number of medical officials who have already served in the active army but have retired while still liable to service are also placed in this reserve.

Apart from the general law governing military service, certain minimum terms of service with the active army are fixed. A surgeon, educated either at the military medical academy or at a university, who has received government aid during his curriculum under terms binding him to serve in the active army, must serve $1\frac{1}{2}$ years for each year during which he has received such assistance.

Medical men who have not received such aid need serve for 2 years only.

Promotion.

Promotion to fill vacant appointments is made on the general principle of selection tempered by seniority, but promotion to Classes IV, V, and VI is governed entirely by merit, the qualifications required being: (a) possession of degrees of Doctor of Medicine or Doctor of Medicine and Surgery: (b) evidence of a high standard of theoretical and practical professional knowledge: (c) sound knowledge of and special suitability for administrative work.

Officials normally perform duties incidental to their rank, but in order to avoid difficulties in administration, which would be caused by too rigid adherence to the relationship between rank and appointment, some degree of elasticity is introduced into the system, by which temporary and provisional appointments may be made. Thus, an official whose rank is of one class higher or two classes lower than that normally attached to the post may be appointed to any particular post, but he is not obliged, against his own wish, to perform duties normally performed by officials of a class more than one degree lower than his own.

Retirement.

The age limits of service are as follows:—

For 1st, 2nd and 3rd medical grades, 65 years.

For 4th medical grade, 62 years.

For 5th medical grade, 60 years.

For 6th medical grade, 58 years.

Pay and Allowances.

The regular emoluments of posts held by a medical official consist of pay and table money, either of which is issuable at a lower or a higher rate. The higher rate is issued in war, and under various specified conditions in peace. The yearly emoluments of certain appointments are as follows:—

	Lower rate.		Higher rate.	
	£	s.	£	s.
District medical inspector ...	473	19	...	520 16
Assistant to district medical inspector or P.M.O. of an army corps ...	...	357 14	...	393 11
Divisional A.M.O. or Brigade A.M.O....	...	236 14	...	271 9
Senior medical officer of a field hospital ...	...	(210 8)	...	238 4
Senior medical officer of a regiment, or of a hospital	157	16	...	185 12
Junior surgeon of a regiment or of a hospital:				
After 8 years' service ...	132	11	...	150 13
After 4 years' service ...	104	16	...	123 14
On appointment ...	82	9	...	102 5

Lodging allowance issuable in lieu of quarters varies with the station as well as with the rank. Thus the highest rates such as are granted in St. Petersburg, Moscow, Odessa and Vladivostock, amount to £26 6s. monthly for an official of Class IV rank. Allowances in lieu of servants amount to £10 10s. a year for each servant. Other allowances occasionally issuable to officials are messing, forage, subsistence and travelling allowances, and also allowances for special work during epidemics. There are also periodical gratuities and periodical and exceptional imperial presents. Field allowances are given in lieu of rations and forage, and in war there are also allowances to families, and a gratuity on commencing a campaign. The income of an officer or official is considerably augmented by these allowances and gratuities.

After 25 years of "faultless" service, an official draws a retiring allowance or pension equivalent to half-pay of the appointment held on retirement; after 35 years' service, a pension equivalent to full pay. In estimating service for pension a period of field service before the enemy counts double, and service for 20 years in the performance of certain administrative and specialized duties entitles to the half rate and for 30 years to the full rate. Time spent as a stipendiary student of the military medical academy counts as service towards pension under certain restrictions. The period of service required for pension is greatly shortened when retirement is compulsory on account of physical disability, especially if the disability has been acquired on service.

Gratuities on retirement are issued, under certain conditions, to those not entitled to pensions.

(b) *Pharmacists and Dentists.*

The pharmacist (*farmatsevt*) of the Russian army must be qualified to practice pharmacy. The law governing liability to personal service grants him similar, though not exactly identical, privileges to those granted to medical men. In the army pharmacists constitute a separate personnel with special duties, and they are employed in the higher and more scientific details connected with the preparation, supply, care and dispensing of medical stores, with the supervision or charge of magazines of medical stores, dispensary depots and the

dispensaries of medical establishments, and with the control of the work of dispensary *feldshers*. They are classed in three pharmaceutical grades and hold official rank in the classes of official rank from X to VI, both inclusive. A pharmacist official must have the lower academical distinction of *provisor* or the higher degree of master of pharmacy, the former entitling him to Class X rank, the higher to Class IX. Promotion is given on much the same principles as in the case of the medical officials; the degree of master of pharmacy being necessary for promotion to Class VII.

Certain other persons, holding minor official positions, are employed, occasionally at least, by the medical service, but do not form part of its essential constitution; these are the dental surgeons, who receive Class X rank, and assistant apothecaries (*aptekarские pomoshchniki*) and dentists who receive Class XIV rank.*

(c) *Subordinate medical personnel.*

(i) *Feldshers.*

The *feldsher* is an important and peculiar element in the Russian army medical service. The term is applied to members of recognized, but inferior and distinct, branches of the medical, veterinary and pharmaceutical professions. In the army, the *feldshers* are the professional assistants of medical, veterinary or pharmacist officials; they may even take their place, and, in fact, act in much the same capacity as the assistant surgeons of the Indian army.

The *feldshers* employed in the purely medical, as distinct from the veterinary, service, are of two kinds:—

(a) Those who have received their training before entering the army.

(b) Those who have been trained in the army.

The first class are qualified to practise as *feldshers* outside the army; the latter class are not so qualified unless they fulfil certain specific conditions.

These are several medical schools, *feldsher* schools, at which *feldshers* qualify, and pupils of the military *feldsher* schools at St. Petersburg, Moscow, Kiev, Tiflis and Kherson, who have

* In 1907 the number of pharmacists actually serving was 239 with fixed establishment of 242.

successfully completed the full course and whose conduct has been satisfactory, serve in the army. A pupil who has been trained in general medical work is appointed to the post of "junior" medical *feldsher* (*mladshi meditsinski feldsher*); one who has been trained in dispensing to the post of "junior" dispensary *feldsher* (*mladshi aptechni feldsher*). For each year of instruction in these military schools each *feldsher* must serve $1\frac{1}{2}$ years with the active army. The appointments are made by district army medical inspectors, under the general orders of the Director-General of the Army Medical Service. *Feldshers* receive on appointment certain privileges, a gratuity of £2 10s. and a *feldsher's* pouch of surgical instruments.

For medical duties not requiring so complete a training as that given in the *feldsher* schools, combatant soldiers may be trained as *feldsher* pupils with the combatant units or in the military medical establishments. Such men before they are selected to become *feldsher* pupils (*feldsherskie ucheniki*), must have served through one camp training, have completed from one to two years' service, be educated and capable, of good conduct, not older than 25 years, and desirous of serving as *feldshers*. Pupils belonging to a unit having its own *lazaret*, or regimental hospital, receive instruction there; those of other units are sent to the nearest *lazaret* of field or local troops, or to other military medical establishments. If, however, the number of *feldsher* pupils in a unit is less than five, they are not trained with their unit, but are sent to medical establishments as above. One-fifth of the total number of *feldsher* pupils receives special training in dispensing. The course of instruction lasts for three years and is carried out in accordance with a special programme; but pupils showing special aptitude and knowledge may pass out in two years. The instructors are the "junior" surgeons and, in hospitals, the pharmacists in charge of dispensaries; all instruction is carried on, however, under the superintendence of the senior medical official of the unit or establishment. In *lazarets*, if occasion arises, "senior" medical officials may be ordered by the district medical inspector to personally act as instructors. Generally, one "junior" medical official is appointed as instructor, but, if more than 25 men are under instruction, a second may be appointed. Examinations are held yearly under the orders of local commanders. The board of examiners

consists of a "senior" medical officer as president and "junior" surgeons as members. At headquarters of military districts the district medical inspector, his assistant, and the administrative medical officers of divisions take part in the examinations. Pupils who have been successful at examinations, have finished the course and who are regarded as satisfactory and zealous in their hospital work, receive a certificate to that effect, and rejoin their units, if they have been instructed away from them. Those who have made special progress may, on the recommendation of the senior medical officials of units, be selected by a district medical inspector to fill the vacancies among the company, squadron and battery *feldshers* (*rotnie, eskadronnie i batareinie feldshera*).

The company squadron and battery *feldshers* are junior to the class known as "junior" *feldshers*, who are *feldshers* trained in the *feldsher* schools before entering the army. Sometimes however some of the latter class are found amongst the company *feldshers*; these are men who have been reduced in rank for disciplinary reasons. Also military recruits, who have been, before enlistment, in civil *feldsher* schools, may receive appointments as company *feldshers*. Except in the case of Jews, company, squadron or battery *feldshers* who have sufficient knowledge and experience, may be appointed by district medical inspectors to fill vacancies in the ranks of the "junior" medical or "junior" dispensary *feldshers*. They are then on an equality, so far as military service is concerned, with *feldshers* who are qualified to practise in civil life. "Junior" medical *feldshers* may be promoted to the appointment of "senior" medical *feldshers*: and "junior" dispensary *feldshers* to that of "senior" dispensary *feldsher*. But the qualified *feldsher*, who voluntarily entered the active army from civil life, may be promoted in another manner. After three years of satisfactory service he may be appointed a "candidate" for service with the class rank of an official (*kandidat na klassnuyu doljnost*); and after not less than a year's service as such, he may receive Class XVI. official rank, the title of Collegiate Registrar (*kollejski registrator*) and the appointment of *feldsher* official (*klassni feldsher*). The duties of this office are practically those of a "senior" *feldsher*.

Feldshers in the army are under the command of the

officers or officials commanding the units or establishments to which they belong, of any officials under whom they work, and of the officers commanding the non-combatant companies or detachments in which they may be included. A "candidate," however, is not subject to the *feldfebel* of the non-combatant company and a "*feldsher*" official is not included in this or any other company. *Feldshers* of regimental units are subject to the *feldfebel*, and company, squadron and battery *feldshers* are included in the strength of the combatant unit. Other *feldshers* usually belong to higher units or establishments medical formations or administrative offices.

The position of the "*feldsher* officials" is more or less similar to that of the class of the most junior officer, of which the *praporshchik* is a type: a *kandidat* ranks with "acting officers." All other *feldshers* belong to the senior grade of the non-combatant subordinate ranks, a grade corresponding to that of non-commissioned officer. "*Feldsher* pupils" of regimental units belong to the junior grade of the non-combatant subordinate ranks, a grade equivalent to that of rank and file.

In hospitals *feldshers* working in wards are specifically termed "*ward feldshers*" (*palatnie feldshera*).

The ordinary pay of "*feldsher* pupils" is 1s. 0½d. monthly; of "junior" and "company *feldshers*," 8s. 5d. monthly, of "senior *feldshers*," 12s. 7½d. monthly. These are the rates in the line regiments, the pay in the Guard is somewhat higher. In certain circumstances it may be increased by half. In peace a "*feldsher* official" in his first ten years of service as an official is paid £35 10s. yearly, after that period £44 8s.

The fixed establishment of medical and dispensary *feldshers* in 1907 was 5,729, of which number 4,400 were actually serving. The number of company *feldshers* actually serving was 3,656 of a fixed establishment of 5,527.

(ii) "*Nadzirateli*."

There is a subordinate personnel, specially trained for medical duties, the members of which receive the name of *nadzirateli*. Literally translated the term means superintendents, who are employed in the performance of duties similar to those of ward masters or in higher nursing duties.

They may be divided into two classes: (a) those serving in extra-regimental hospitals and establishments; (b) those serving in the regimental hospitals.

The *nadzirateli* serving in the extra-regimental hospitals of a garrison are either hospital *nadzirateli* (*gospitalnie nadzirateli*) or ward *nadzirateli* (*palatnie nadzirateli*). The former, whose duties correspond fairly closely to the general hospital duties of non-commissioned officers of the Royal Army Medical Corps, belong to the senior grade of non-combatant subordinate ranks, and therefore rank as non-commissioned officers. They are selected from amongst the ward *nadzirateli*. The latter perform duties similar to those of non-commissioned officers and men of the nursing section R.A.M.C. employed in wards. They are selected from the rank and file of hospital detachments on account of having shown special aptitude for the work and are classed in the junior grade of non-combatant subordinate ranks. There are two rates of pay for these ward *nadzirateli*, and they are classified amongst themselves as being either on the higher or the lower rate.

The *nadzirateli* serving in regimental hospitals are not divided into classes. They correspond to the regimental hospital sergeants of former days in the British service, and are appointed by the commanding officer of the unit on the recommendation of the senior surgeon. They perform duties similar to those of the extra-regimental hospital *nadzirateli*, and like them are non-combatants of the senior grade. Regimental *nadzirateli* are paid at the same rates as "junior *feldshers*." The nursing and other duties in a regimental *lazaret* are performed under these men by orderlies detailed, permanently or temporarily, from the unit, as noted below.

The relationship of hospital or regimental *nadzirateli* to *feldshers* below the rank of "candidate" who may be serving in the same unit with them is rather complicated. They give way to the *feldshers* in professional matters, whereas they are superior in non-professional matters.

(d) *Officers, non-commissioned officers and men of combatant units, doing duty in medical units.*

Officers.

The extent to which combatant officers, non-commissioned officers and men take part in the interior administration and

work of the medical service is shown in detail in the description of various medical establishments and formations noted below. Generally speaking, the anomalous situation exists, in which the extra-regimental hospitals as well as the regimental *lazarets* are placed in peace time under the command of combatant officers, whereas in time of war they are under the command of the medical officials.

The higher command of groups of hospitals is also directly in the hands of combatant officers. In military districts and in the armies corresponding to military districts the hospital service, as apart from the departmental control of medical personnel, is administered by officers on the staff. But in fortresses, in independent army corps, or in independent forces other than armies or army corps, the senior medical official has a certain amount of authority in the general administration of the hospital service.

The duties of officers in medical establishments and formations are not necessarily merely those of general supervision and command. They and certain other officials have also control over supply, general management and interior economy. Matters of a purely technical professional nature are left, however, in the control of the medical officials.

When combatant officers are detached from their own units for employment in the medical service, the transfer is not necessarily permanent, nor are the officers specially trained for duty in the medical service except in connexion with the training of stretcher-bearers, as noted below. An officer who is placed regimentally in charge of the regimental *lazaret* acts for the officer commanding the regiment. In smaller units, such as a battery, the commander usually takes direct charge himself.

Non-commissioned officers.

For the performance of duties of stretcher-bearers and of general duties in regimental and other hospitals, non-commissioned officers and men of regimental units are employed. They are formed into stretcher-bearer detachments or companies, or hospital detachments, and are commanded by the combatant officers of these establishments.

The non-commissioned officers are detailed for subordinate

command in the bearer companies, and in the larger extra-regimental *lazaret* and hospital detachments, but a small *lazaret* detachment, such as that of a regimental *lazaret*, is commanded directly by the *nadzirateli* or hospital sergeant of the regiment. On the other hand, in the detachments of field and permanent hospitals combatant non-commissioned officers are often appointed as hospital sergeants, normally in the proportion of one *feldfebel* and one *kaptenarmus* for each hospital. The *feldfebel* becomes the hospital and detachment sergeant-major, and is termed the "senior" hospital *nadzirateli*, other non-commissioned officers being termed "junior" hospital *nadzirateli*. The *kaptenarmus* has charge of the detachment stores and the uniform, clothing, equipment, &c. of patients.

Rank and file.

Rank and file attached to the medical service are classified either as orderlies (*slujiteli*) or as bearers (*nosilshchiki*).

Hospital orderlies.

The orderlies are detailed regimentally for general duties in regimental *lazarets* or by the orders of commanders of districts for extra-regimental medical establishments. They form, with the *nadzirateli* and the non-commissioned officers, the *lazaret* or hospital detachments (*komandi*). The orderlies in extra-regimental establishments wear the prescribed uniform of the establishment. The individual members of a hospital detachment are described under the general name of *prislugi*, a word which may be freely translated as "sick attendants"; they are employed chiefly as general duty men, but those who show special aptitude are trained in nursing and become eligible for selection to fill vacant appointments as *nadzirateli*.

Stretcher-bearers.

The men who are trained as stretcher-bearers are never detached from their combatant units in time of peace, and are classed as combatants. Their training is carried out as follows:—Not less than four men forming one stretcher squad, in each company (including fortress artillery companies) squadron, *sotnya*, battery or park, are selected as regimental stretcher-bearers. They must be men of strong constitution

and of good physique. The selections are not made before men undergo their first annual camp training, and the men composing an individual squad are of various terms of service. Thus, in a unit, in which the term of colour service is four years, the senior bearer, who commands the squad, is in his fourth year of service, the next senior in his third, the next in his second, and the most junior in his first year. When the most senior passes to the reserve, he is relieved by the next senior then commencing his fourth year of service.

Classes for the course of instruction in bearer work are formed each year in regiments, independent battalions and artillery brigades. The course generally begins soon after the assembly of troops in the camps of exercise and comprises not less than 20 lessons. But exercises are also carried out during the winter at least once a week.

The *lazaret* detachments or orderlies and the buglers, trumpeters and musicians, volunteers excepted, of cavalry and infantry are also trained with the stretcher-bearers, but the buglers, trumpeters, and musicians may be trained separately if it is more convenient to do so. The *lazaret* detachments may also be trained independently; their *lazaret* duties are carried out in their absence by *feldsher* pupils. When there are no *feldsher* pupils two classes for the instruction of the *lazaret* detachments must be formed. The instruction is given by a "junior" medical official specially detailed for the purpose. A "junior" combatant officer is also appointed for supervision as well as to acquire knowledge of stretcher-bearer work. The "senior" medical official exercises general supervision under the commanding officer of the regiment. Inspections are made by the divisional commander and the divisional administrative medical officer as well as by the regimental commander. A register showing names of all men trained is kept, and a note of the fact of a man having been appointed a stretcher-bearer or having been trained as such is made in his discharge papers when he passes into the reserve.

When paraded together the bearers in a regiment constitute the "regimental stretcher-bearer detachment."

The number of men trained is sufficient not only for peace establishments of the regimental stretcher-bearer detachments, but also to complete the war establishments of regimental stretcher-bearers and to furnish cadres for divisional bearer companies. In each regimental unit such a cadre is maintained

in strength equal to half the war establishment of bearers. In addition to this cadre which is composed of combatant soldiers all *nadzirateli* and hospital orderlies of the active, reserve and fortress units, together with the buglers, musicians and trumpeters—volunteers excepted—are available for duty in bearer detachments or companies, after they have passed through a course of training. As regards the field training of bearers, the drill is simple and practical. Four bearers work with each stretcher and are distinguished by numbers and by designations descriptive of their positions in lifting and lowering wounded. The squad is divided into an “active file” (Nos. 1 and 3) and a “reserve file” (Nos. 2 and 4), thus emphasizing the smallest number of men who can work with a stretcher; No. 2 is the senior and in command.

The stretcher detachment of an ordinary infantry regiment is organized for work as a company (*rota*); it is divided into half-companies, each half-company (*polurota*) into two sections, and each section (*vzvod*) into two “patrols.” Each patrol (*patrul*) consists of sixteen bearers.*

The “sick attendants” for a regimental *lazaret* are detailed from the unit by the officer commanding; for extra-regimental hospitals they are detailed by the general officer commanding the military district. Some are practically permanently employed as hospital orderlies, especially those who are employed in nursing duties in the regimental *lazarets*.

(f) *Non-combatant Personnel other than Medical*

In the medical service as well as in other branches of the army, officials of what has been termed the accountant class are employed. The work of these officials is concerned primarily with economic details and general management, and not with the special technical work of any branch of the service. They supply the place of our quartermasters as regards matters of general supply; but they are usually given executive powers, according to the appointment which they hold, over any subordinate personnel who may be employed in connexion with general management. They have the general

* A regiment of four battalions, which would have one bearer company, has thus 128 trained stretcher-bearers or 8 stretcher-bearers to each company, and 32 to each battalion. This is double the number of stretcher-bearers allowed to infantry battalions in other armies.

management of all non-technical work, and are not directly concerned with stores of technical material.

Certain other officials, including chaplains, are included in establishments of the medical service.

Clerks also form a separate non-combatant class in medical units and establishments. They hold "senior" and "junior" grades in the subordinate ranks of non-combatants.

Men of the *lazaret* and hospital detachments are employed as cooks and bakers, but there is no special organization corresponding to the cooking section, R.A.M.C., as the proportion of soldiers who have a knowledge of cooking before enlistment is exceptionally great in the Russian army.

(g) *Civilian personnel.*

The female nurses, or sisters of mercy, are the chief employés of a purely civilian character in military hospitals, or in connexion with the army medical service generally. The nature and conditions of their employment are detailed in Chap. IV; they are a prominent feature in the Red Cross organization of Russia.

Local civil medical practitioners may be employed as occasion demands, but the number of civil medical practitioners who are not medical officials of the reserve is comparatively small.

Other civilian employés form no distinctive class in connexion with the Russian medical service.

ADMINISTRATION AND DISTRIBUTION OF PERSONNEL.

The departmental chief of all army medical personnel is the principal army medical inspector (*Glavni Voennno-Meditsinski Inspektor*). He is the director-general of the army medical department (*Glavni Voennno-Meditsinski Upravlenie*), which is one of the departments of the War Ministry and which controls generally the whole of the medical personnel. His directorate consists of a central office with three sections (*a*) for medical personnel (*b*) for sanitary questions (*c*) for supply of technical material. There are also subsections for mobilization and statistics. Attached to the directorate is an army medical technical board, (*Voennno-Meditsinski Uchenii Komitet*) the function of which is to make recommendations

and reports, based on scientific investigation. This board controls to a very great extent medical education in the army.

The principal army medical inspector, or director-general, is also a member of the chief military sanitary committee, which is under the presidency of the chief of the general staff and of which the other members are the chief of the engineers and the chief intendant. This is a legislative body for the purpose of supervising army medical organization.

The director-general selects officials for duties carrying with them Class V official rank, submits their names to the War Minister for appointment and arranges generally for the distribution of this class of official. As regards officials of Class VI and lower classes he appoints, transfers and retires them on his own authority, acting on personal knowledge and on the reports of district medical inspectors. He appoints surgeons and pharmacists to duties in medical establishments, but the selections are made by military commanders, under whose authority the establishments are placed, such selections being communicated to him through other departments of the War Office. In transferring or removing officials of this class after appointment he acts according to the recommendations of the officers commanding the medical establishments.

The grade of administrative medical officials next to the director-general are the district medical inspectors (Class IV official). A district army medical inspector (*okrujni voennomeditsinski inspektor*) is the principal medical officer of a military district, which usually contains one or more army corps and has in it the headquarters of an army. He carries out, within the limits of the district, transfers of medical officials of the 5th and 6th medical grades and pharmacists of the 3rd pharmaceutical grades as well as veterinary surgeons of corresponding grade and *feldsher* officials. These transfers are only transfers to posts suitable to the official rank and are not definite promotions. Regarding transfers from his own to other districts, a district medical inspector sends recommendations to the director general of the army medical department.

The assistant (*pomoshchnik*) of the district medical inspector is an official of Class V rank. He is specially selected for the appointment, and in the absence of the district inspector acts for him. If the troops in the district are mobilized and the district medical inspector becomes field medical inspector of the army thus formed, the

assistant takes over the duties of district medical inspector.

Next to the district medical inspector in the chain of administrative medical responsibility is the corps surgeon (*korpusni vrach*), or principal medical officer of an army corps. He is of Class V rank, and belongs to the head-quarter staff of the corps. He exercises the same powers as a brigade commander for purposes of supervision and discipline in connexion with the medical personnel of the corps. His administrative powers also include the promotion, appointment and interchange of *feldshers*. The divisional surgeons or administrative medical officers of the divisions belonging to the army corps are under his supervision. Independent brigades quartered in the region allotted to the army corps are also subject to his authority as regards medical matters.

The administrative medical officer (*divizionni vrach*) of a division is subordinate to the principal medical officer of an army corps, but if the division does not form part of an army corps he is directly subject to the district medical inspector. He holds Class VI official rank. He has the disciplinary powers of a commander of a regiment over the medical personnel of the division, and is the immediate head of the "senior" surgeons and other medical and veterinary personnel of the division. If convenient, medical supervision of the *lazarets* of troops not belonging to divisions but quartered near a division may, under the orders of the War Minister, be exercised by the divisional administrative medical officer.

The senior medical officer of a brigade (*brigadni vrach*) is of the same official rank (Class VI) as a divisional administrative medical officer, and his duties are also similar. Such officers are appointed to brigades which are not included in divisions, namely the rifle, reserve, Cossack, sapper and railway brigades, and the Irkutsk and Omsk local brigades.

In a fortress, the fortress surgeon (*kryepostnoi vrach*) is on the fortress headquarter staff and is the head of the medical personnel in the fortress garrison. In a first or second class fortress he ranks in Class V, in a third class fortress in Class VI. Although fortresses are not excluded from the medical supervision of district medical inspectors, a fortress surgeon is, to a considerable extent, independent; he exercises in fact the powers of a medical inspector and his duties are more closely assimilated to those of a director of medical services in time of war than are those of any medical official with a field army.

Next to divisional, brigade or fortress administrative medical officers come the regimental "senior" surgeons. It must be understood, however, that these are not the only officials who rank as "senior" surgeons, for there are medical officials, not serving with units, who may hold as high an official rank as Class V and yet be termed "senior surgeons." Moreover, there are certain regimental "senior" surgeons, referred to in the section on "auxiliary lazarets," who occupy a position different to that of the majority. But as a general rule a "senior" surgeon (*starshi vrach*) is appointed to each regiment, independent battalion, artillery or park brigade. He belongs to Class VIII official rank, and, with regard to medical personnel serving under him, has the powers of a battalion commander. Under him are the "junior" surgeons, *feldshers* of all kinds, including the company, squadron and battery *feldshers* and *feldsher* pupils, the medical subordinates and the regimental orderlies, who are employed in nursing duties; also, in units to which no veterinary surgeon is attached, the veterinary *feldshers*.

A "junior" surgeon (*mladshi vrach*) is the general term for a medical official performing executive duties. Junior surgeons are distributed among the troops in the proportion, approximately, of one per battalion, one per cavalry regiment, one per artillery brigade, one per horse or howitzer artillery division, one per artillery park brigade or independent park. In addition to this distribution of medical officials in combatant units, there is a large number of medical officials who serve in the various classes of military hospitals and medical establishments or who are employed as district or other specialists, or who serve in educational establishments and military factories.

The officials of the pharmacist grades do not serve with regimental units. They are employed in the dispensaries of the various hospitals, in the magazines and depots of medical stores, in the factories of medical material, and in the medical administration offices.

The medical and dispensary *feldshers* serve everywhere as personal assistants to surgeons and pharmacists.

"Senior" medical *feldshers* are usually in charge of the small group of *feldshers* who form what are termed *feldsher* detachments in an administrative medical office or in a medical formation or establishment. *Feldshers* of official rank and "candidates" perform the same duties as "senior" *feldshers*,

and are distinguished merely by their personal position and prerogatives.

"Junior" medical *feldshers* are distributed among combatant units in the proportion of one per battalion in the infantry, one in each cavalry regiment, and generally in the proportion of at least one for each of the junior surgeons.

Dispensary *feldshers* are distributed to *lazarets* and hospitals. There is one in each regimental *lazaret*. The class of work they perform is not much affected by their grade, "senior" or "junior," but the "senior" dispensary *feldshers* work normally under the pharmacists in the extra-regimental medical establishments, and supervise the "junior" *feldshers*.

Company, squadron and battery *feldshers* are distributed in the proportion of one for every two infantry companies, (in war one for each company), and one for each squadron, *sotnya*, battery, park, artillery or engineer company.

As regards other personnel connected with medical services the main details of administration and distribution have already been noted. As already stated, the peace establishment of regimental stretcher bearers is not less than four for each company, squadron, *sotnya*, battery and artillery park of active, reserve and fortress units. The number of orderlies permanently detailed for regimental *lazarets* is small; normally only three in an infantry regiment, two in a cavalry regiment and one in an artillery brigade.

The female nursing personnel, termed "sisters of mercy," who are not under religious vows, are distributed according to requirements in the extra regimental hospitals of various kinds. They form part of the Red Cross Society's organization and are referred to in detail in Chapter IV.

MILITARY HOSPITALS AND OTHER ESTABLISHMENTS.

Military hospitals and kindred institutions in Russia are classified as follow:—

1. Receiving rooms (*priemnie pokoi*).
2. Regimental *lazarets* (*voiskovie lazareti*).
3. Augmented *lazarets* (*usilennie lazareti*).
4. Permanent hospitals (*postoyannye gospiitali*).
5. Local *lazarets* (*myestnie lazareti*).
6. Army medical stations (*sanitarniya stantsii*).

Receiving Rooms.

For units which have no *lazarets* of their own also for units which have *lazarets* but do not open them, in consequence of being quartered in places where there are permanent hospitals or local *lazarets*, receiving rooms are opened under the orders of districts commanders as regimental hospitals.

The number of beds which are equipped in these rooms is as follows:—

In an infantry battalion	...	...	...	...	4
In a cavalry squadron	...	...	...	...	2
In an artillery battery (field)	...	...	...	...	2
" " battery (horse)	...	...	...	...	2
" " battery ("sortie")	...	...	...	...	2
In a train cadre battalion, 2-company	...	...	...	...	2
" " " 4-company	...	...	...	...	4

For other small units 2 beds are provided if the strength is 100 men or less, 3 beds for 200 to 300 men, 4 beds for 300 to 500 men. For units of greater strength 4 beds are provided for every 500 men.

Sectional receiving rooms may be opened under the same conditions as those under which sections of regimental *lazarets* are opened, as noted below.

In separate rooms, corresponding to our inspection rooms, slight cases are treated as out-patients: these rooms are in or near the buildings in which *lazarets* or receiving rooms are opened.

Regimental Lazarets.

A regimental *lazaret* forms part of the establishment of those combatant units which have their own administrative unit. There has never been any corresponding unit in the British service, and the Russian regimental medical arrangements are scarcely comparable with the British regimental hospitals of former times or with any subsequent regimental medical arrangements.

Although the disadvantages of having a medical unit attached and belonging to a combatant unit are apparent, the Russian regimental *lazaret* is of interest as an example of how a unit, which in its essential features is a field ambulance, may be maintained in peace time and in a state of efficiency for mobilization.

Regimental *lazarets* are opened as regimental hospitals (a) by the commander of the unit when no permanent hospital or local *lazaret* is available and accommodation for sick in excess of that afforded by receiving rooms is required, (b) by order of the commander of the military district when standing hospitals or local *lazarets* are full. In camp, for example, direct admission into extra-regimental medical establishments may not be possible, convenient or desirable. Regimental *lazarets* of reserve and fortress units may be opened by order of the local authority in similar circumstances. Hospital accommodation in regimental *lazarets* is provided in peace in the general proportion of three beds for every 100 men; up to 150 men are counted as 100, from 150 to 250 as 200, and so on.

Men of other units may be admitted into any regimental *lazaret*.

The *lazaret* remains commonly at the headquarters of a unit. If there is a permanent hospital or local *lazaret* in the place in which the regimental headquarters are established, the regimental *lazaret* need not be opened as a whole, but it may be necessary to open a section of it for some portion of the unit, which may be quartered at a distance from headquarters or local medical establishment.

In camps, especially if space is limited and in order to avoid the general inconvenience of having a number of small hospitals, several regimental *lazarets* may, by order of the district commander, be joined into a massed *lazaret* (*svodni lazaret*). This is established in connexion with one of the units in the camp and is placed under the command of the officer commanding that unit.

As already noted a regimental *lazaret* is under the command of the officer commanding the regiment, but he delegates his powers to an officer specially appointed to the charge, except in small units, when he may take direct charge himself.* The "senior" surgeon of the unit controls the *lazaret* in medical matters, but is also a delegate of the officer commanding the unit. In time of war, however, the "senior" surgeon assumes complete command of the regimental *lazaret*.

For accommodation of the *lazaret* rooms are appropriated

* The medical official is now given full charge of the regimental *lazaret* by a recent decree.

in barracks as wards, etc., even though the *lazaret* is not opened. The following is the number of beds equipped for the various units of the active army in time of peace:—

Infantry :					Beds.
4-battalion regiment	...	...	...	...	84
Battalion (independent)	...	...	...	...	28
Cavalry :					
Per squadron, in 6 squadron regiment				...	5
Per squadron, in 4-squadron regiment				...	6
The Oset horse division (2 squadrons)				...	16
Artillery :					
Field battery	...	...	...	...	8
Horse battery	...	...	...	...	8
Howitzer battery	...	...	...	...	8
Engineers :					
Sapper or pontoon battalion	...	...	...	...	28

In reserve and fortress regiments and battalions the accommodation in peace time is the same as that in war.

In embodied Cossack regiments, hospital equipment is maintained according to war tables and not according to the above peace table. Additional material may be issued when their *lazarets* are opened in peace, according to requirements.

Augmented Lazarets.

These are exceptional establishments which are formed when local or other conditions render such a course advisable, in order to provide additional accommodation for the sick of some particular unit. The Preobrajensk, Moscow and Finland regiments of the Guard, also the Horse Guards, have each an augmented *lazaret*. As in the case of the ordinary regimental *lazaret* the commander of the unit is the military and the "senior" surgeon of the unit the medical chief of the institution. The "senior" surgeons of the above-mentioned regiments belong to Class VI official rank in consequence of their increased responsibility and they draw special pay.

The constitution of these augmented *lazarets* is in many respects assimilated to that of the permanent military hospitals, and medical officials are specially appointed for duty in them as "*ordinators*."

Permanent Military Hospitals.

Distributed in the military districts are found the permanent military hospitals of large garrisons. These institutions are graded, according to size, as 1st, 2nd, 3rd and 4th class hospitals. A 1st class hospital is the smallest; it has 5 beds for officers or corresponding ranks and 150 for men; a 2nd class hospital has 10 officers' and 300 other beds; a 3rd class hospital 33 officers' and 500 other beds; a 4th class hospital 38 officers' and at least 800 other beds. Each hospital has moreover a reserve of beds for use when occasion arises; a 1st class hospital has a reserve of 2 officers' and 50 other beds, a 2nd class hospital a nearly proportionate reserve, while the larger hospitals have proportionately larger reserves.

It may be necessary to establish a hospital of a size less than that of a 1st class hospital in some particular place. If such an establishment is so far away from other hospitals as to necessitate its being administered as a separate unit, it is termed a "half hospital"; if it is administered as a section of a permanent hospital it is termed a "section hospital." Special sections may be established during epidemics. Sections, detached or otherwise, are also established for the treatment of special kinds of diseases, such as mental and nervous diseases. Some of the large permanent hospitals are clinical hospitals; these have a special establishment and equipment. Otherwise the permanent hospitals have establishments according to their numbered class.

The charge of a permanent hospital is held by a combatant officer, who commands all the personnel in it. The head of the medical personnel is designated the chief surgeon (*glavni vrach*) or senior medical officer. His official rank in 1st and 2nd class hospitals is Class VI, in the larger hospitals Class V. A chief surgeon has subordinate command of all other medical personnel. The subordinate command of non-medical personnel is given to officials of the accountant or quartermaster class. They form part of the establishment of practically all extra-regimental medical units. In the largest hospitals of the 4th class a combatant officer is generally added to the establishment for disciplinary duties.

In the two larger classes of permanent hospitals certain medical officials of Class VI are appointed as consultants

(*konsultanti*). There are two of these in each 3rd or 4th class hospital. The medical officials in charge of wards and patients are termed *ordinatori*, or “ordinators,” a term which it will be convenient to use in referring to them. Of these ordinators some are “senior,” some “junior”; the former may be said to belong normally to Class VIII official rank, the latter normally to Class IX. The “senior ordinators” occupy positions of considerable responsibility and have administrative charge of wards or groups of wards; the “junior” ordinators work under the senior ordinators as executive medical officers.

In each hospital there is a pharmacist in charge of the dispensary, and there is a proportionately large establishment of “senior” and “junior” medical and dispensary *feldshers*.

A *feldfebel*, as senior hospital *nadzirateli*, a *kaptenarmus* and two other hospital *nadzirateli* are also appointed to each hospital. The individual duties of a hospital *nadzirateli* are practically the same in permanent hospitals as in *lazarets*.

The dieting of patients in permanent hospitals, as also in *lazarets*, is arranged for by a caterer; a sum being fixed as the average price of a diet.

The number of permanent military hospitals in Russia is 27, with a total of 15,221 beds.

Local Lazarets.

These are garrison or military hospitals other than those distinctively termed “permanent hospitals.” Whereas the latter are primarily intended for the accommodation of the sick of active units, *i.e.* units of field troops, the local *lazarets* are opened in stations, where cadres of reserve and depot troops are maintained, where fortress infantry regiments and battalions or local troops are quartered, for establishments under the War Office, as well as at certain administrative headquarters of circle commandants. In other places they may be established as independent medical establishments. For the purpose of distinction, they take the names of the towns or places in or near which they are established.

Sick are admitted to these *lazarets* from: (a) the troops for which they are primarily intended: (b) any troops which happen to be halted in, or to be marching through or near the locality: (c) any class of persons entitled to free treatment in military hospitals.

Every local *lazaret* has a military commandant. The local *lazarets* for reserve, depot, fortress or local troops are under the commanders of local units: those which are opened as independent hospitals are either under circle commandants or under specially appointed officers.

In technical matters these *lazarets* are directly under the district medical inspectors.

The medical officials doing duty in them are not called "*Ordinators*" as in the case of permanent hospitals, but "senior" and "junior" surgeons as in the case of regimental *lazarets*. The official in medical charge is the "senior" surgeon, his rank and pay being dependent on the size of the *lazaret*. If he is in medical charge of a *lazaret* of 200 or more beds he belongs to Class VI official rank, of 100 to 199 beds to Class VII, and up to 99 beds to Class VIII. The "junior" surgeons rank in Class IX.

The daily rate issuable for subsistence of patients in local as also in regimental *lazarets* is 1s. 0½d. for each officer and half that amount for an individual of lower rank.

The number of local *lazarets* is 164 with 14,813 beds.

Army Medical Stations

These institutions are for the treatment of sufferers from chronic diseases and for special treatment at health resorts. "Temporary medical stations" are also formed periodically to receive sick from hospitals while the latter are being cleaned, refitted, &c. Medical stations are established, under the orders of the Military Council, for not less than 50 men each. There are no special regulations regarding establishment and equipment; these matters are settled and arranged for by the military district administration concerned.

For administrative purposes army medical stations are under local brigade commanders. They are classed in two categories, being described either as *sanitarno-lechebniya* or *sanitarno-gigienicheskia*, according as they are of the nature of hospitals or of sanitaría. In the latter category are classed the medical stations for eye diseases formed yearly in the Odessa district and in the vicinity of the fortress of Novogeorgievsk and temporarily in the Kiev district.*

* The number of *sanitarno-lechebniya* or therapeutic stations is 23, of the *sanitarno-gigienicheskia* 6, of eye stations 2.

MEDICAL AND SURGICAL STORES.

The establishments for supply of technical material to hospitals, *lazarets*, &c., are the central factories or laboratories of medical and surgical material and the dispensary magazines and depots. The factory in St. Petersburg forms an establishment which manufactures and supplies practically the whole of the medical and surgical material of the army. Surgeons of Class V official rank are in charge of the medical and surgical sections and of the technical laboratory. The army medical factory in St. Petersburg occupies a very large area on one of the islands, and, although it has existed from early times of army medical organization, it was completely re-organized for modern requirements in 1893. The work in it is carried on in three sections—(1) for manufacture of surgical instruments, (2) for pharmaceutical preparations, (3) for dressing material. The last section is specially interesting. The various workrooms and the equipment have been designed so as to enable the workers to prepare the dressings under the most aseptic conditions possible. The employés in it are all healthy young girls who are subject to rigid hygienic rules. They wear special clothing of white washable material, as well as caps and indiarubber gloves, while at work. As a factory of an army medical service it is in advance of those which exist in Vienna, Madrid, Tokio and other capitals, and may, in fact, be described as the most important and extensive of its kind in any country.

The more important of the local stores are :—the dispensary magazines (*aptechnie magazini*) at Moscow, Kiev, Bobruisk, Omsk, Tiflis and Tashkend, under the charge of pharmacists of Class VI rank: the dispensary depot (*sklad*) of Khabarovsk and the dispensaries for the Don army under the charge of pharmacists of Class VII: the dispensary depots at Warsaw, Brest-Litovsk, Dvinsk, Kazan and Kremenchug, under pharmacists of Class VIII.

There are, moreover, mobilization stores of medical and surgical material, which will be again referred to in the section on “mobilization” in Chapter III.

ARMY MEDICAL EDUCATIONAL ESTABLISHMENTS.

Medical officers are appointed to the army from amongst graduates of the military medical academy in St. Petersburg,

or of the seven state universities of Moscow, St. Petersburg, Yuriev, Kiev, Kharkov, Kazan, and Helsingfors. As already noted, graduates with the lower degree are given the 9th class of official rank, the military rank of which is 2nd captain, and those with the doctor's degree the 8th class, or relative military rank of captain.

The military medical academy has the same constitution as regards curriculum of studies and granting of degrees as the medical faculties of the universities. The number of students in it must not exceed 750. They live in private homes but wear a uniform and are under the supervision of staff officers and their subordinates. The course of study is for 5 years, but 21 of the more diligent and abler students may be permitted to complete the course in three years. Six of these may be selected for further study in foreign universities. The students may be either stipendiaries of the state or independent of state aid, but all must have obtained the leaving certificate of a *gymnasium*, the equivalent of the classical side of our public schools. The teaching establishment of the military medical academy is large, and consists of a medical officer, as commandant, 22 professors and 12 lecturers, and a number of prosectors, laboratory assistants, librarians and others. There is also an establishment for administration and general duties.

In addition to the students educated by state aid in the military medical academy in St. Petersburg and, in consequence, under obligation to serve as medical officers in the army, the state grants a *stipendium* of £30 or £40 to 320 students at the Universities of Moscow, Yuriev, Kazan, Kharkov and Kiev, who are also obliged to serve as medical officers in the army for $1\frac{1}{2}$ years for every year in which they received this state aid. Certain restrictions are placed upon Jewish students studying at the military medical academy, and also upon their holding certain positions in the army medical service.

The military medical academy further serves the purpose of a post-graduate institution, fifty-six military surgeons being detailed yearly for a course of instruction lasting two instructional academical years. Thirty-eight of the above-mentioned class undergo instruction in general medical knowledge, thirteen receiving extra allowances; the other eighteen surgeons undergo special training in military surgery,

twelve receiving extra allowances. Surgeons are recommended for these courses to the headquarters of the army medical department by district medical inspectors, who consider the recommendations of the army corps and divisional principal medical officers.

The medical officers for these courses are selected from among those who have served in the active army for at least four years and have done well in practical work. For the special surgical course they must be men who have specially engaged in surgical work, have shown evidence of surgical knowledge and have supervised surgical wards in either military or civil medical establishments for not less than a year. The more important surgical operations, which have been performed by them, are noted on the form of recommendation.

The course of instruction in general medical knowledge for post-graduates comprises : (a) practical work in the clinics for internal, venereal, skin, nervous and mental diseases, (b) practical work in methods of clinical investigation, especially in the clinics for diseases of the eye, ear and throat, (c) practical pathology including histological work, (d) theoretical and practical instruction in military hygiene.

The governing board decides details as to the yearly courses for the special class in surgery, having regard to military requirements. The general programme includes work in the surgical clinic, with a course of field surgery and instruction in the latest methods of diagnosis and treatment, operations on the *cadaver* and all other recognised methods of imparting theoretical and practical knowledge of surgery, surgical anatomy and pathology. Instruction in military hygiene is also given to this class.

Surgeons who specialize in surgery at the Academy are appointed as "ordinators" to military hospitals.

For each year of post-graduate instruction in the Academy surgeons must continue to serve actively for a year, or, if they have received extra allowances, $1\frac{1}{2}$ years.

Lists of all medical officials who have received certificates from the governing board after a post-graduate course are kept in the medical sections of army and district headquarters, those who have passed in general medical knowledge and those who have specialized in surgery being on separate lists. Such medical officials are thus noted as specially eligible for the appointments of "senior" surgeons,

"senior" ordinators, consultants, senior medical officers, and divisional administrative medical officers, as well as for special leave to study abroad.

The chief clinical institution which is associated with the military medical academy is the large clinical military hospital of St. Petersburg, but medical officers are also detailed for attendance at civil as well as military clinical hospitals and for university courses in various branches of medical science.

A certain number of medical officials are trained for appointment as "ordinators" of sections for mental disease. For the purposes of this training they are yearly placed on command for duty for a term of two years at the clinic for mental diseases in the clinical military hospital. They perform the ordinary duties of "ordinators" in this hospital and study mental diseases under the director of the clinic. A special daily allowance of 2s. is issuable to surgeons while on this course. A surgeon who has finished the course must continue to serve actively $1\frac{1}{2}$ years for each year of such special employment. The medical officials detailed for the courses of instruction in mental disease are nominated by the Director General of the Army Medical Department. Their number is not less than one for every two sections for mental diseases in the military hospitals of the empire.

A certain number of medical officials, as well as veterinary surgeons and pharmacists, are detailed to study, at government expense, military medical matters in foreign countries, in peace and war: the term of such foreign study is usually from one to two years. Candidates for such employment must have served actively in the military medical service for not less than six years, be well qualified and thoroughly competent in professional work, and have a sound knowledge of military medical organization and of German, French or English.

There are special army *feldsher* schools at St. Petersburg, Moscow, Kiev, Tiflis and Kherson for training selected youths as army *feldshers*. The course of training lasts four years, and is a fairly complete course in medical subjects, modified to suit a subordinate medical service. Various branches of general education are also included in the course, and the course for pupils intending to serve as dispensary *feldshers* is adapted for their special work. The *feldshers* trained in

these schools may be employed on fixed salaries as medical practitioners in communities where there are no doctors, as well as in the army.

A school for the training of soldiers for duty as company, squadron or battery *feldshers* is established at every military hospital or local *lazaret*, as well as at each of the larger regimental *lazarets*.

An army medical laboratory for the Caucasian district, at Tiflis serves the purpose of a special military school for hygiene.

ARMY MEDICAL JOURNALS, SOCIETIES, ETC.

The principal journal published in Russia in connexion with the Army Medical Service is the *Voенно-Mедицинский Журнал*. It is published monthly. Articles of military medical interest also appear in the military journal, the *Russki Invalid*.

CHAPTER III.

THE MEDICAL SERVICE IN TIME OF WAR.

GENERAL ORGANIZATION.

In field organization three zones are taken into account. The first zone is that of field operations (*raion voennikh dyeistvi*). The second zone, developed as a force advances, comprises the territory in rear of the army (*til armii*), through which it has advanced and made its lines of communication. This zone, as well as the first, is under the control of the general officer commanding the field force. The third zone is that of the home territory or interior of the empire (*vnutri Imperii*) which is administered under peace conditions for the purposes of the campaign by the Headquarter Staff at the War Ministry.

It should be noted that there is no break in military administration at the head of a line of communication.

A force employed in operations in any theatre of war is organized into armies, each distinguished by designations or

numbers, under an Army Commander (*Komanduyuschi Armieyu*). The commander of a group of armies is termed the Commander-in-Chief of the Armies (*Glavnokom nduyuschi Armiyamî*), and is responsible to the Emperor alone. His Chief of the Staff (*Nachalnik Shtaba*) has under him the three branches of the Commander-in-Chief's Staff, namely :—

- (a). The Department of the Quartermaster-General with the Commander-in-Chief.
- (b). The Department of the Adjutant-General with the Commander-in-Chief.
- (c). The Railway Department of the Commander-in-Chief.

Army commands are similarly organized as regards its higher administration. Under the Chief of Staff there are three principal departments, as field staff, each respectively under the following officers :—

- (a). The Quartermaster-General.
- (b). The Adjutant-General.
- (c). The General of Communications.

In addition to the Chief of the Staff there are also directly under an Army Commander the Intendant of the Army, the Inspector of Artillery, the Inspector of Engineers, the Chief Paymaster, the Chief Field Controller, and, if such an appointment be made, the Director of Medical Services, who is a combatant officer. The several departments of these officers or officials are independent departments, and comprise, together with those of the field staff, the field administration of the army (*polevoe upravlenie armii*). If the army is operating in a military district of Russia, the military district administration under the acting district commander is also subject to the army commander.

Under the Adjutant-General (*Dejurni General*) are certain subordinate departments, namely those of the Judge Advocate General, the Commandant at Headquarters, and the Senior Chaplain. If no Director of Medical Services is specially appointed the subordinate departments for medical services are also under the Adjutant-General.

The General of Communications superintends all matters concerning the establishment and working of the lines of communications of the army, and the station commandants and lines of communication troops are under him. The

subordinate departments under him are the Lines of Communication Department, the Road Department, the Postal and Telegraph Department, and the Transport (or Convoy) Department.

The personnel of the staff of a field army, formed under normal conditions for an European war, is furnished by the staff of the military district in which the army is formed, the general officer commanding, chief of staff, commanders of artillery and engineers, chief intendant, medical inspector, etc., taking over the corresponding functions in the field army to those of their peace appointments, while their assistants take their places in the districts. This arrangement does not apply to forces formed for a campaign such as that in Manchuria. For campaigns in a remote region like that, special arrangements are made for the formation of armies and for the personnel of the staff.

An army corps, or a force formed of divisions, to which a special sphere of action is appointed, or which is detached from an army for a special expedition, may receive the designation of "independent army corps" and be furnished with a special staff.

Medical formations are associated in organization with transport formations and to understand them properly, the general organization of transport must be known.

All military transport is included in one or other of the following formations:—

1. Regimental train (*polkovoi oboz*).
2. Divisional train (*divizionni oboz*) or rifle brigade train.
3. Corps transport and supply column (*korpusni prodovolstvenni transport*).
4. Army transport column (*armeiski transport*).

The vehicles of a regimental train are either 1st line transport or 2nd line transport. 1st line transport follows immediately in rear of its own unit: 2nd line transport follows the general column of troops and only joins units at the halt for the night.

A divisional train is 3rd line transport and consists of two sections, the supply section and the medical section. The divisional train follows at a distance of one march, (20 to 25 versts or approximately $13\frac{1}{3}$ to $16\frac{2}{3}$ miles), behind the general column of troops, the supply section leading.

The transport and supply column of an army corps consists

of 536 two-horsed baggage wagons. This follows divisional transport.

Army transport columns work under the Director of Transport on lines of communication, and carry not only material for general purposes but also sick and wounded. These columns may contain wheeled and pack transport, including camel transport, either military or hired. They are the equivalent of the British auxiliary transport columns.

Under the commander of a fortress (*komendant kryeposti*) are the fortress staff and the several departments of fortress administration, viz., engineer, artillery, intendance and medical. To each fortress is appointed a territorial zone, the fortress zone (*kryepostnoi raion*), under the commander of the fortress.

CLASSIFICATION OF MEDICAL UNITS AND ESTABLISHMENTS.

The medical units and establishments of the Russian field medical service may be classified for purposes of description as follows from the front to the base:—

1. *Field Ambulances (Lazarets)*—
 - (a) Regimental lazarets.
 - (b) Divisional lazarets.
 - (c) Brigade lazarets.
2. *Field Hospitals*—
 - (a) Mobile field hospitals of divisions.
 - (b) Mobile field hospitals of army troops.
 - (c) Reserve field hospitals.
 - (d) Massed field hospitals.
3. *Detachments of Convalescents, or Convalescent Depots.*
4. *Clearing or Evacuation and Distributing Commissions with Collecting, Evacuating and Distributing Stations*—
 - (a) Field clearing commissions.
 - (b) Lines of communication evacuating commissions.
 - (c) Distributing commissions.
 - (d) District and circle committees.
 - (e) Chief evacuating commission at War Office.

5. *Units for Transport of Sick and Wounded*—
 - (a) Sick and wounded transport columns for road transport.
 - (b) Ambulance and other trains for railway transport.
 - (c) Ambulance and other vessels for waterway transport.
6. *Units for Special Sanitary Work*—
 - (a) Bacteriological columns.
 - (b) Disinfection columns or trains.
 - (c) Quarantine stations.
 - (d) Mobile laundries.
7. *Units for Supply of Medical and Surgical Equipment*—
 - (a) Field dispensaries.
 - (b) Temporary depots of medical stores.
 - (c) Permanent depots of medical stores.
8. *Fortress Temporary Hospitals.*
9. *Permanent Hospitals and Local Lazarets, etc., in the Home Territory.*
10. *Voluntary aid units.* (Although these are noted last in order, they are employed as described in Chapter IV in all zones.)

Detailed descriptions of these units are amplified in instructions dealing with mobilization, employment of the medical units on battlefields, and evacuation and distribution of sick and wounded. The general character of these instructions is noted below under separate headings.

It should be noted that the distinction between the units in the zone of field operations and those on the lines of communication, as in the case of the Austro-Hungarian field medical organization, is more or less artificial; and that with the exception of the regimental and divisional *lazarets* and the divisional field hospitals, no medical units, mobile or otherwise, are under a smaller group than an army. Army corps have no medical units as corps troops. In this respect, too, the Russian is analogous to the Austro-Hungarian organization.

The minor units carrying on the functions of clearing hospitals and rest stations on lines of evacuation are grouped under the general work of the clearing, evacuation, and distributing

committees, all with the one generic term of evacuating committees or commissions, which are a special feature of the Russian clearing hospital arrangements.

THE ADMINISTRATION OF THE MEDICAL SERVICE DURING WAR.

The commander-in-chief of a force composed of more than one army has no principal medical officer on his staff, or other director of medical services, except by special appointment when such is considered advisable.* There is a senior surgeon (Class VI), however, at the headquarters of the commander-in-chief; but he is merely an executive official under the adjutant-general. The veterinary surgeon at headquarters comes under his control.

As regards army administration, according to regulations published in 1890 and still in force, the medical administration of an individual army is independent of any higher control except that of the army. The adjutant-general of an army is the nominal head of the medical service within it. But, in the Manchurian Campaign in 1904-05, a combatant officer was specially appointed to each army as director of medical services (*nachalnik sanitarnoi chasti armii*). He was directly under the general officer commanding the army and not under the adjutant-general. The direction of the medical service was thus taken out of the hands of adjutants-general, and this is likely to be the rule in future wars. Otherwise the adjutant-general would be the director of medical services, and the medical service would then come under the chief of the staff.

A specially appointed director of medical services of an army is a lieutenant-general and therefore senior in official

* This was done in the Manchurian Campaign of 1904-05, a director of medical services, a combatant officer, General Trepov, being appointed to the staff of the commander-in-chief of the armies, with the title of chief director of medical services of the Manchurian Armies; (*glavni nachalnik sanitarnoi chasti Manchjurskikh armii*). In this campaign in addition to the chief director of medical services of the armies, a deputy director of medical services in rear of the army (*nachalnik sanitarnoi chasti tila armii*) was appointed; he was subject to the general officer commanding in rear of the armies (*glavni nachalnik tila armii*). A director of evacuation of sick and wounded in the Siberian military district (*nachalnik sanitarno-evacuatsionnoi chasti v Sibirskom voennom okrugye*) was also appointed for evacuation duties at a distance from the area of field operations.

The regulations for the last-mentioned appointment were published by the Military Council in 1905.

rank to any medical officer serving under him. He has general control of the medical service in an army and is concerned more especially with co-ordinating the work of the various officers serving under him. His office is under an office director (*pravitel kantselarii*), an officer whose powers are similar to those of the chief of the staff of an army corps. It is divided into three sections, viz., hospital, medical and clearing or evacuating sections. In the first the organization, control and distribution of medical units and the supply to these of material, other than technical, is dealt with. The work of the medical section is concerned with (a) measures for preventing disease amongst the troops, (b) the supply of technical equipment and stores, and (c) the professional care of sick and wounded. In the clearing section orders and instructions for evacuating the sick and wounded and for organizing means for this purpose are prepared and issued.

In addition to the office or chancery, the director of medical services has the following departments under him:—

- (a) The field military hospital department (*polevoe voenno-gospitalnoe upravlenie*).
- (b) The field military medical department (*polevoe voenno-meditsinskoe upravlenie*).
- (c) The field veterinary department.
- (d) The department of voluntary aid.

At the head of (a) is the field inspector of hospitals (*polevoi inspektor gospitalei*), at the head of (b) is the field medical inspector (*polevoi voenno-meditsinski inspektor*).

The department of voluntary aid has at its head the chief commissioner or plenipotentiary of the Red Cross Society (*glavnoupolnomochenni Obshchestva Krasnago Kresta*).

The field inspector of hospitals is a combatant officer, usually a major-general. He controls all medical units in the army, except those for the supply of technical material, which are under the field medical inspector. As regards medical units of divisions, rifle brigades or regimental units, he does not interfere with the powers of commanders of these units; he controls, however, dressing stations, which may be established by medical units attached to divisions. As regards medical personnel and technical work, he has no general control, but officers commanding medical units not belonging

to divisions, whether combatant officers or medical officials, are directly subject to him and receive his orders direct. The distribution, general discipline, management, housing and interior economy of these units all come within the control of his department. He is also the departmental chief of all non-medical personnel employed in medical units, and is the responsible authority for supplying to medical units all material other than technical. The general organization of the work of collecting and evacuating sick and wounded is primarily in his hands. The office of the department of the field inspector of hospitals, *i.e.* the field military hospital department, has an assistant in charge, who has the powers of a chief staff officer of a division. The following officers and other personnel are also directly subject to him :—

1. Local commandants of hospitals.
2. Presidents of clearing commissions.
3. A reserve of personnel for administration duties, &c.*

The field medical inspector is the chief of the medical personnel of the army, and carries out any reliefs, postings and transfers required in that personnel. His department is concerned with :—

- (a). All measures of hygienic and medical policy.
- (b). The supervision of technical work and classifying sick and wounded for evacuation.
- (c). The supply of technical equipment and stores for all medical units.
- (d). The preparation of all kinds of accommodation for sick and wounded.
- (e). The discipline of the medical personnel of the army.

His department has an office similar to that of the field hospital department.

The following individuals are also directly under his control :—

1. The chief specialist or consulting surgeon (*glavni chirurg*).
2. The senior medical officer in executive medical charge of the headquarters of the army, and also under

*This reserve is used for replenishing wastage, for appointment to new units, &c., and is equal to 5 per cent. of the establishment of non-medical official personnel comprised in the medical service of the army.

certain conditions the senior veterinary surgeon having corresponding duties.

3. Reserve of medical personnel, similar to that of the field hospital department. This reserve consists of medical officers equal to 10 per cent. of the establishment for the army, and of *feldshers* equal to 5 per cent. of the establishment.

Further, if the army is operating in a military district of Russia, the acting district medical inspector is subject to the field medical inspector. In this case the acting chief of the district staff performs the duties of the inspector of military hospitals in the district.

The field medical inspector corresponds with the medical department of the War Office regarding the medical requirements of the army, so far as they are under that department's control. He carries out War Office instructions, and furnishes reports to it concerning medical administration and work.

The chief specialist surgeon is of Class V official rank, and is entrusted with the following duties :—

- (a) The general direction of the surgical work of medical officers.
- (b) Personal performance of difficult operations.
- (c) General supervision as regards the upkeep of instruments and surgical material.
- (d) Supervision of the work of cutlers in field dispensaries.
- (e) Adaptation of dressing stations to surgical work.
- (f) Keeping a record of surgical work in the army.

Next to the field medical inspector in the chain of administrative responsibility in the army are principal medical officers of the several army corps comprised in the army, and the principal medical officer of any independent army corps or smaller independent units (*e.g.* divisions) operating in touch with, but not forming part of, the army.

The principal medical officer of an army corps is responsible both to the corps commander and to the field medical inspector of the army for all matters relating to the health of troops. He deals with supply of technical material to the medical units of the army corps and the disposal of any medical material captured from the enemy or requisitioned. In the absence of superior authority, he supervises generally the work of the dressing stations with special reference to the provision,

before an action, of adequate personnel and material and with regard to the opening, clearing and closing of them in accordance with the plans of the general officer commanding the corps. If a delegate of the Red Cross Society is attached to the army corps, (in the case of an independent army corps he would be a chief commissioner under the chief of staff), the principal medical officer of the corps gives instructions to him relative to the employment of voluntary aid, but does not otherwise interfere with the interior organization of the Society. Generally he carries out the duties of principal medical officer, but has no medical units directly under him as corps troops.

The commandant at headquarters of an army corps, (*korpusni komendant*), an officer who is in charge of corps police duties, assists the principal medical officer during an action in opening of dressing stations and in making provision for and removing wounded* ; he collects at dressing stations the transport, both government wagons and country vehicles, required for this purpose. He also arranges for men being detached from combatant units, when necessary, for the collection and evacuation of wounded, and is responsible that they rejoin as soon as possible. He regulates the transport duties in the immediate rear of troops engaged. After an action he makes arrangements for disposal of the dead, takes charge of prisoners, trophies and effects captured from the enemy.

There are also administrative medical officers with divisions and brigades. Their special functions are indicated in the sections dealing with the divisional and brigade *lazarets* or field ambulances.

In each fortress there is a fortress principal medical officer (*krepostnoi vrach*) directly under the commander of the fortress. In the case of a 1st class fortress he has the disciplinary powers of a divisional commander, and in 2nd and 3rd class fortresses those of a brigade commander. All medical personnel of the fortress and any medical establishments or units, not regimental, come directly under him. He is also the president of a special sanitary committee which deals with sanitary measures in and around the fortress. The opening and closing of dressing stations are regulated by him under directions received from the chief of the fortress staff.

* In the same manner, a "commandant" at army headquarters affords assistance to the inspector of hospitals.

MEDICAL UNITS WITH THE FIELD ARMY.

Field Ambulances (Lazarets).

The *lazarets* in war time are a species of field ambulance, and are comprised under three headings: (a) *lazarets* of regimental units: (a) divisional *lazarets*, one to each infantry division: (c) brigade *lazarets*, one to each of a few rifle brigades.

Lazarets always accompany the troops or tactical units to which they belong; their common objects are:—

1. During fighting:—to form dressing stations.
2. On the march:—to take into wagons men unable to march.
3. During halts:—(a) to provide “out-patient” treatment for slight cases: (b) to take temporary care of more serious cases, a function which is limited: (c) to remove non-effectives to the field hospitals.

Lazarets of Regimental Units, Regimental Medical Service.

The *lazaret* of a regimental unit, being essentially an ambulance and maintained as such in time of peace, is readily mobilized as a complete field unit. It keeps in touch with the regimental staff, but may, under orders of superior authority, be temporarily detached, or part of its personnel and material may be detached.

The special function in action of a regimental *lazaret* is to form an advanced dressing station (*peredovoi perevyazochni punkt*): on certain occasions, as mentioned later on, it may be employed in other directions, under superior authority.

The normal establishment and equipment of a regimental *lazaret* are shown in Appendix I.

The senior medical officer of the regiment is in immediate command of the *lazaret* in time of war, and all the personnel at a dressing station formed by it is under his command. In an action, under the orders of the regimental commander, he chooses a place for a dressing station, near water, sheltered from fire and if possible with adequate buildings or trees; otherwise the regimental tents must be used for the shelter of wounded. He obtains straw or hay for beds, makes his arrangements for the supply of drinking water and arranges for feeding patients. He has under him the regimental

chaplain and his assistant, also an officer or under-officer to take over arms, ammunition and equipment of wounded, and regimental clerks to prepare lists of wounded. These individuals perform their duties at the dressing station. He has also the regimental stretcher-bearers under him and he organizes the removal of wounded during an action to the main dressing station of the divisional or brigade ambulances or to the field hospitals.

The immediate assistant of the senior medical officer of a regiment as regards non-professional duties at the dressing station is the *nadziratel*,* who carries out his chief's orders as to issue of provisions to wounded and personnel, lighting, etc. He has the powers of a *feldfebel* in maintaining discipline amongst the *lazaret* subordinate personnel.

As regards the treatment of sick at halts and on the march the arrangements are made suitable to the occasion. Sick are sent, according to their condition, on foot or in wagons to a field hospital, and not to the divisional *lazaret*. If sent in an improvised transport column, not having its own medical personnel and material, the senior medical officer of a regiment details the necessary personnel and medical material for their care during the journey.

If a medical officer is not available for this duty, an experienced *feldsher* may be detailed.

All medical transport of regiments is 1st line transport, including all transport required in action, which, on the march, follows immediately in rear of its unit. When conflict with the enemy is anticipated, ambulance wagons continue with the ammunition carts to move immediately in rear of their units, the remainder of the 1st line transport following in rear of the column. In the cavalry, however, the whole of first line transport is in rear of the column. In a retirement the first line transport moves at the head of the several units or at the head of the column.

Of the 32 stretchers of an infantry regiment, 16 are carried on the company ammunition carts, one stretcher in each cart, and 16 are carried in the ambulance wagons, four stretchers in each wagon. The arrangement for an independent battalion is similar. Of the six stretchers for a 6-squadron cavalry regiment, three are carried in ammunition carts, the remainder

* See p. 40, Chap. II.

in the ambulance wagons, two stretchers in one wagon and one in the other. Of the 12 stretchers of a field artillery brigade two are carried in each battery on the spare gun carriage: the two stretchers of a horse battery are carried in the same way.

In the *lazaret* of an infantry regiment (4 battalions), 32 men may be carried on stretchers, and from 20 to 32 in ambulance wagons: 16 men may be provided with beds, and 160 with food for one day. In the *lazaret* of a cavalry regiment (6-squadrons), 6 men on stretchers, from 4 to 8 in ambulance wagons, may be carried: 6 men may be provided with beds, and 60 with food for one day.

Divisional Lazarets, Divisional Field Ambulances.

One Divisional *Lazaret* (*divizionni lazaret*) forms part of the war establishment of each infantry division. A cavalry division has no divisional *lazaret*, but a reserve of 55 first field dressings is carried in the divisional transport column.

The functions of a Divisional *Lazaret* are (a) to form a main dressing station (*glavni perevyazochni punkt*) in action; (b) to evacuate sick and wounded from the division to the nearest hospitals.

The establishment and equipment are given in Appendix I.

Each divisional *lazaret* has material for carrying 50 wounded at one time on stretchers, with 4 bearers to each stretcher, and 32 lying and 8 sitting, or 64 sitting in ambulance wagons. It has accommodation for 80 wounded in marquees, and supplies for feeding 400 wounded in one day.

The divisional *lazaret* forms part of the divisional train, being one of the three units which are comprised in the medical section of the train, the other two being field hospitals. The divisional train is 3rd line transport, and follows the troops at a distance of a day's march. But the units of the medical section, as also pontoon battalions, telegraph units, artillery and engineer parks, move as required, with the 2nd or 3rd line transport or separately from either.

The divisional *lazaret* is under the executive command of the administrative medical officer of the division, who is directly under the general officer commanding the division. He has directly under him a medical officer as assistant, who commands the medical personnel, and a combatant officer,

smotritel, who commands the bearer company and other non-medical personnel. His chief duty is to keep his *lazaret* clear and ready for work on the battlefield, the point emphasized being that it is not intended for treatment of sick, although it aids in conveying them to the field hospitals, &c.

The administrative medical officer's assistant (*pomoshchnik divizionnago vracha*) is a selected medical officer of Class VIII rank, and among other qualifications for the appointment must be a good practical surgeon. He performs the duties of the administrative medical officer in the latter's absence from illness or other cause.

The senior medical *feldsher* has the special duty at the main dressing station of entering in the prescribed book particulars of wounded coming in; the dispensary *feldsher* keeps an account of expenditure of dressings, etc.

The *smotritel* is the officer commanding the bearer company; his command includes his assistant, the *lazaret* detachment and the transport personnel, and he has charge of all vehicles, horses, stores (except technical material), government cash and valuables of patients. The equipment of the *lazaret* includes a money chest, to which only the divisional administrative medical officer and the *smotritel* have access. A guard over it is provided from the general establishment. The *smotritel* also carries out the duties of a quartermaster, as regards general supplies, either directly or through his assistant. His disciplinary powers are those of the commander of a dependent battalion. During an action he supervises the transport of wounded.

The *smotritel's* assistant (*pomoshchnik smotritelya*) is usually an accountant official, who carries out the usual duties of such an official. He is an accounting and responsible superior steward for stores, supplies and book-keeping.

The bearer company (*rota nosilshchikov*) works in action either alone or in conjunction with the regimental stretcher detachments, as described later on. At other times the men are employed on sanitary duties in and in the vicinity of the medical units of the division, and are generally at the disposal of the divisional administrative medical officer or his assistant for the duties of a sanitary company for the division. Although a component part of and mobilized with

the divisional *lazaret*, the bearer company is officially termed "the bearer company of No. 1 (2, 3, etc.) infantry division" (*rota nosilshchikov takoi-to pekhotnoi divizii*).

Brigade Lazarets, Brigade Field Ambulances.

A brigade *lazaret* (*brigadni lazaret*) is an exceptional unit comprised in the war establishments of five rifle brigades of European Russia and the rifle brigades of Finland. Its general constitution and functions are similar to those of a divisional *lazaret*.

It is under the executive command of the senior medical officer of the brigade (Class VI rank), with an assistant brigade surgeon (Class VIII rank) in command of medical personnel and a *Smotritel* in command of non-medical personnel, the latter also commanding the bearer detachment (*komanda nosilshchikov*).

The remaining personnel consists of 2 junior surgeons, 1 official as assistant to the *smotritel*, 5 *feldshers* (3 medical, 1 dispensary, 1 veterinary), 2 clerks, 14 men of the *lazaret* detachment, 11 non-commissioned officers and 130 rank and file of the bearer detachment, 2 non-commissioned officers, one senior, one junior, and 30 men of the transport detachment. The vehicles are eight light 2-horsed ambulance wagons, each for two men lying down or four sitting, 15 baggage wagons and two dispensary carts. There are 40 stretchers for the bearer detachment and the same number of surgical haversacks, in addition to 2 stretchers in each ambulance wagon. There are 5 small tents, and 384 reserve rations are carried. The reserve store of 400 packets of first field dressings for a rifle brigade is carried in the transport of the brigade.

A brigade *lazaret* is divisible into two sections of practically similar composition. When so divided, the senior medical officer (brigade-surgeon) and his office, the *smotritel* and the senior transport non-commissioned officer are with one section, while the assistant brigade surgeon, the assistant *smotritel* and the junior transport non-commissioned officer are with the other section. The position of the brigade-surgeon is similar to that of a divisional administrative medical officer.

Field Hospitals.

A force in the field is provided with field hospitals in numbers proportional to the number of infantry divisions. In proportion to each infantry division eight field hospitals are provided: half of these are called mobile field hospitals (*podvijni polevoi gosptal*), half are reserve field hospitals (*zapasni polevoi gosptal*). Of the whole number, two of the former only are divisional units. The remainder belong to army troops.

For each independent rifle brigade one mobile field hospital is provided. The Eastern Siberian rifle divisions have six, instead of eight, field hospitals, half of them mobile and half mobile reserve.

Cavalry divisions have no field hospitals.

Each field hospital (*polevoi gosptal*) is organized for the accommodation of 10 officers and 200 men.*

Details of the establishment and equipment of the mobile field hospitals are given in Appendix I. A reserve field hospital differs from it in having no special transport, tents or reserve rations, only two stretchers, no veterinary *feldsher* and only two transport drivers.

The two mobile field hospitals attached to divisions, or divisional field hospitals, form with the divisional *lazaret* the medical section (*sanitarni otdyel*) of the divisional train.

Mobile field hospitals have their own transport, which is so constructed as to be capable of employment in the work of evacuating the hospitals. But sick and wounded may not be conveyed by this transport to a distance greater than one day's march (25 versts or 16.6 miles) from the field hospital, except by special order of the general officer commanding the division, or, in the case of the mobile field hospitals not attached to a division, of the army inspector of hospitals.

Reserve field hospitals are moved, as required, by rail, by hired or requisitioned transport, or by other available means, as may be convenient, under arrangements made by the inspector of hospitals.

Mobile field hospitals are numbered consecutively, and

* The total number of beds in mobile and reserve field hospitals is calculated as equal to 7.4 per cent. of the strength of the divisions in the field. This, of course, is exclusive of beds in the regimental and divisional *lazarets* and in any other medical establishment outside the area of operations.

reserve field hospitals also consecutively, but independently of the mobile hospitals.

The divisional field hospitals accompany the division and are opened for receiving sick and wounded as dressing stations, or, in the event of fairly prolonged halts, when no other hospitals are near, as hospitals. The sick and wounded are, however, received only with a view to transferring them on the first opportunity. If, on the occasion of an advance of the division, there are sick and wounded in its field hospitals, and no other hospitals are near, then, under the orders of the divisional commander, one of the field hospitals transfers its patients, no matter how many there may be, to the other and proceeds with the division. The hospital left behind is then cleared and rejoins as soon as possible.

Mobile field hospitals, not belonging to divisions, and reserve field hospitals are distributed in the area of operations, are opened and closed, and relieve one another under the direction of the inspector of hospitals, acting under the general orders of the adjutant-general of the army.† Some of the reserve field hospitals may be established at posts on the lines of communication for accommodation overnight of sick and wounded travelling by rail, thus performing the functions of a railway rest station, such as is organized in the Austro-Hungarian army.

Field hospitals have no counterparts in the British service, except that the reserve field hospitals may be regarded under certain circumstances as the equivalent of our stationary hospitals, and the non-divisional mobile field hospitals as the equivalent of our clearing hospitals. The object of the Russian system of field hospitals, mobile and reserve, is to ensure a steady flow of evacuation of sick and wounded. The hospitals are interchangeable, adaptable, and easily moved.

When several field hospitals not belonging to divisions are concentrated at one point, a local commandant of hospitals (*myestni nachalnik gosptalei*) may be appointed. He is an officer directly under the inspector of hospitals and is selected by him. He commands these hospitals in the same way as the divisional administrative medical officer commands the divisional field hospitals. He is given a staff for office work proportionate to the extent of the area he administers and the number of hospitals under his command.

† i.e. if no director of medical service is appointed.

The medical officers of a field hospital are designated according to their appointments, just as in the case of permanent hospitals, and are the senior medical officer (*glavni vrach*) and the "ordinators." The former, an official of Class VIII rank, is in immediate command of the whole unit. His disciplinary powers are those of a regimental commander. He allots duties to medical officers serving under him according to their special abilities, and appoints ward *feldshers*, sick attendants, hospital orderlies and nursing sisters to their various duties, &c. His rôle as regards medical work is that of supervisor and consultant: he sees that the ordinators instruct the ward masters in the care of patients; he is responsible that men are not kept in hospital unnecessarily; that due economy in expenditure is exercised, and that the whole unit is properly managed. He orders boards of survey on stores, on receipt and periodically; also a board of two ordinators reports to him monthly on the condition and working of the dispensary. He is an officer specially selected by the army field medical inspector in consultation with the army inspector of hospitals, and on mobilization his name is submitted by the former to the adjutant-general for appointment. His office works in two sections: a medical section under the "senior ordinator," for dealing with receipt and expenditure of medical material and matters relating to medical personnel, and an administration section under the *smotritel* for dealing with receipt and expenditure of other material relating to non-medical personnel. The treasure chest is kept in the office; the senior medical officer keeps the key and the *smotritel* the government stamp. A guard, furnished from lower ranks of the hospital detachment, is placed over the chest.

The "senior ordinator" (*starshi ordinator*), of Class VIII rank, is also appointed by the medical inspector. He assists in matters relating to medical work and personnel, acting for the senior medical officer in his absence. The "junior ordinators," who are of Class IX rank, have charge of wards and perform orderly duty.

The pharmacist in charge of the dispensary is of Class VIII rank; his appointment is also made by the field medical inspector. He superintends the work of the dispensary *feldshers* and attendants in the dispensary, and has the powers of a company commander with regard to them.

The *smotritel* of a divisional field hospital is appointed by the general officer commanding the division; in the case of the other field hospitals the appointment is made by the inspector of hospitals. He may be an officer or other official, but his rank must not be higher than Class VIII. He is the assistant of the senior medical officer in matters connected with general management and discipline, transport and police duties, and, under him, commands all personnel other than medical, with the powers of a company commander. Otherwise his duties are those of the quarter-master of a British medical unit. He may, however, delegate much of this work to his assistant (*pomoshchnik smotritelya*), who is an official of Class IX rank.

The medical *feldshers* serving in field hospitals are termed ward *feldshers* (*palatnie feldshera*). They are under the orders of the ordinators as regards their duties in care of sick and in maintenance of order in their wards. They perform orderly duty under the orderly ordinator; they also at other times obey his orders. One of the senior medical *feldshers* may be an official with class rank.

Of the hospital non-commissioned officers (*gospitalnie andzirateli*) the *feldfebel*, as the senior, acts as sergeant-major of the hospital and of the hospital detachment; the *kaptенarmus* keeps the detachment clothing and equipment store and takes over clothing, equipment, &c., of men admitted to hospital. Both of them are combatant non-commissioned officers. One of the non-combatant hospital *nadzirateli* is in charge of the provision store and detachment messing; another superintends the laundry, arrangements for cleansing, supervising, receipt and re-issue of linen, &c., while the others look after equipment issued for use in the wards, supervise the distribution of food to patients, and see to the cleanliness and neatness of patients and wards.

The ward masters or attendants (*palatnie nadzirateli*), whether on higher or lower rate of pay, are employed in nursing duties.

The ordinary hospital orderlies (*slujiteli*) of the grade corresponding to the rank and file are employed in general hospital duties. They and other soldiers of "lower ranks" are included in the hospital detachment (*gospitalnaya komanda*) which is named after the field hospital to which it belongs.

The nursing sisters are provided by the Red Cross Society and vacancies in the field are filled by the society, on notification by the adjutant-general through the chief Red Cross commissioner with the army.

When several of the field hospitals, which are not divisional units, are opened in one place, the adjutant-general may for convenience in administration direct them to be grouped together in twos or threes. Field hospitals thus united together form what is called a massed field hospital (*svodni polevoi gospital*) of 420 or 630 beds. These massed field hospitals receive the name of the locality in which they are established.

The medical personnel and personnel for general management are appointed to a massed field hospital by the field medical inspector and the field inspector of hospitals, according to a fixed establishment, shown in Appendix I; this does not include all the individuals on the establishment of the field hospitals, which form the massed field hospital. Those who have become supernumerary by the process of massing join the general reserve of medical and administrative personnel, with the exception of chaplains, who are placed at the disposal of the senior chaplain of the field army.

The process of forming a massed unit out of several separate units includes opening new registers, etc., and amalgamating offices, dispensaries, laundries and stores. After amalgamation the new unit is administered in exactly the same way as any other field hospital. It may at any time be disintegrated and split up again into its original constituent field hospitals.

The massing of field hospitals is intended to economize personnel, as regards senior medical officers, pharmacists, senior medical feldshers, *smotriteli*, assistant *smotriteli*, secretaries, chaplains, sacristans, clerks, hospital *nadzirateli*, wardmasters on higher pay, and general duty men. A massed hospital has only one senior medical officer, one pharmacist, one *smotritel*, one secretary, one chaplain, one sacristan, one clerk on higher rate of pay, one *feldfebel* and one *kaptenarmus*.

Detachments of Convalescents or Convalescent Depots.

Detachments of convalescents form in the Russian army what are practically field convalescent depots, similar to the field convalescent depots of the Austro-Hungarian army; or the *dépôts d'éclopés* of the French army.

At certain field hospitals, not belonging to divisions, there are formed under the direction of the adjutant-general convalescent detachments (*slabosilnaya komanda*) of strengths varying from 50 to 100 men. To these detachments are sent (a) men who have recovered from wounds or disease, but who are not yet strong enough to rejoin their units; (b) men suffering from fatigue; (c) men who do not require hospital treatment but who are suffering from slight wounds, other injuries, or sickness. These may be sent to convalescent detachments either from hospitals or direct from their units, from the former by the senior medical officers, and from the latter by boards held by order of officers commanding units and composed of a field officer and two surgeons. The invalids or convalescents are quartered in houses or other well-lighted buildings, if possible. In summer they may be placed in tents.

For administration, interior economy and medical care and treatment a convalescent detachment is under the senior medical officer of the field hospital, to which it is attached; but for immediate command a special officer, who may be a wounded officer, is appointed by the adjutant-general, with the disciplinary powers of a company commander. This commanding officer also performs the duties of a quartermaster as regards supplies, and is responsible for cleanliness, good order and management. He is also responsible for providing occupation for his men and for seeing that they do not loaf; they are to be given military and physical training exercises and suitable work under medical supervision, so that they may be sent back to units fit for all duties.

The commanding officer organizes his detachment into squads, he selects a *feldfebel*, non-commissioned officers, cook and baker, and arranges routine duties. A nominal roll is kept showing units to which men belong and dates of joining and leaving the detachment.

Requisitions for all intendance supplies are made out according to the requirements of the senior medical officer and the messing is managed on the same lines as in a company.

For furniture, cooking utensils, bedding and petty necessities the senior medical officer receives a sum of money, according to the strength of the detachment, from the Adjutant-General.

The hospital commander appoints one of the hospital "ordinators" to the medical charge of the detachment and provides him with a *feldsher* and medical and surgical material.

The "ordinator" has the power of discharging men, fit to rejoin their units; they are sent back to the troops under arrangements made by the field hospital.

Besides the convalescent depots attached to field hospitals, independent convalescent depots may be formed. Their strength, organization and administration are subject to special arrangements, made by the adjutant-general at the time of their formation.

Convalescent depots may also be formed in fortresses, by order of the fortress commandant, at permanent or temporary fortress hospitals in the same way as they are formed in connexion with field hospitals, or they may be formed as independent convalescent depots under special arrangements.

UNITS FOR CLEARING THE MEDICAL UNITS OF A FIELD ARMY.

Clearing, Evacuating and Distributing Commissions.

Committees formed for directing the work of clearing the field medical units are called "evacuating commissions," as a general term. Their composition and functions, together with the minor units under their control are described under the special heading of evacuation of sick and wounded.

UNITS FOR THE TRANSPORT OF SICK AND WOUNDED.

Sick and Wounded Transport Columns.

A sick and wounded transport column (*voenno-sanitarni transport*) is a unit of definite composition employed for the purpose of evacuation by road. The establishment and equipment are given in Appendix I.

Each army receives on mobilization a number of these units, in proportion not exceeding one for each army corps. Each is designed to carry, as a normal number, 200 sick and wounded, 60 lying and 140 sitting; it is capable, therefore, of clearing a field hospital in one journey. Transport and

equipment for 20 of these columns is maintained in time of peace: the columns are numbered consecutively.

Sick and wounded transport columns are employed in conveying sick and wounded: (a) from combatant units to the nearest field hospitals; (b) from dressing stations and from field hospitals, which have opened on the field of action, to other medical units; (c) from one field hospital to another, or to railway stations or quays according to the general plan of evacuation. Transport columns returning to the front take with them from the hospitals the men who have recovered and hand them over to the combatant units as they go along.

Sick and wounded transport columns are under the control of the field inspector of hospitals. They are distributed in the area of military operations under the general direction of the adjutant-general. Some may be placed under the command of army corps commanders, others under commanders of independent forces or divisions, or under commandants of local hospitals. The command exercised over them by divisional or other commanders, or by divisional or other administrative medical officers, is the same as these officers exercise over the field hospitals attached to their command.

Each sick and wounded transport column has, as its commander (*komandir*), a field officer chosen by the field inspector of hospitals and approved by the adjutant-general. He commands all personnel of the formation, and has the powers of a dependent battalion commander. His duties comprise maintenance of order, discipline and efficiency in his command and making general provision for the sick and wounded. He is responsible for obtaining supplies and for control of expenditure. Although all subordinate ranks are available for guard duties, &c., he may not take away for such duties attendants directly employed in care of sick, without consulting the senior medical officer.

The commissary (*kommissar*) of a transport column directly manages the interior economy of the unit; he keeps the key of the treasure chest and has custody of articles of value belonging to patients, the commander being present when such articles are taken over or returned.

The senior medical officer (Class VIII rank) is selected from among surgeons who are specialists in practical surgery. All the medical personnel, nursing sisters and sick attendants are under him. He supervises the medical and

pharmacist work and allots duties to those under his orders. He takes over the sick and wounded, loads them into the vehicles and arranges for the special care of individuals who may require it. If supplies for sick and wounded are unsatisfactory in quality or quantity he reports to the commander. For maintaining discipline among the medical personnel he has the powers of a dependent battalion commander.

Improvised transport columns for sick and wounded are also formed in the area of operations, the personnel for such being fixed by commanders-in-chief of armies on the representation of the adjutant-general. They are organized as far as possible similarly to the regular sick and wounded transport columns.* The transport material may be from either army or local sources.

Ambulance and other Trains for Transport by Rail.

The arrangements for mobilization include the provision of a regulated number of ambulance trains, according to previous agreements between the War Office and the railway companies. Details regarding the establishment, equipment, constitution and administration of these trains were published in 1904.

An ambulance train (*voenno-sanitarni poyezd*) is organized to accommodate 20 officers and 232 men. Some of the cots are allotted to slight cases and some to severe cases. All have lying down accommodation.

The railway cars for the accommodation of sick and wounded are third-class passenger bogie coaches, arranged internally on the Pullman system with sleeping berths. The entrance is constructed to admit of men being carried in and out of the car on stretchers. Railway companies are under obligation to keep ready in time of peace a fixed number of these coaches.

The composition of an ambulance train is shown in Appendix I.

The coach for sick and wounded officers accommodates 8 severe and 12 slight cases, and each coach for seriously sick

* In the Manchurian campaign (by *prikas* of the War Ministry, No. 185 of 1904) "half columns" for transport of sick and wounded (*voenno-sanitarnie polutransporti*) were formed. They carried 100 patients, 30 lying; the vehicles used for each column were two-wheeled carts, 50 for transport of patients and one for the nursing sisters; a kitchen cart of the cavalry pattern, (2-horsed), was also added.

and wounded soldiers accommodates 18 men. Each coach for slight cases has accommodation for 32 in ordinary passenger sleeping berths, berths being arranged in two tiers. When a carriage is prepared for the accommodation of seriously sick and wounded the ordinary berths are removed and special fittings on Kruger's system are placed inside the compartment. These fittings are of the nature of stands with springs on which the cots rest.

Slight, as well as severe, cases are provided with bedding (mattresses, pillows, sheets, rugs), and canvas barriers are used to prevent men from falling out of their berths.

The commandant (*komendant*) of the train is an officer having the powers of a commander of an independent unit. He receives, for expenses in providing for the subsistence of the sick and wounded and for maintenance of the train, a fixed daily rate of money according to the number of patients carried. This is issued to him one month in advance.

The senior medical officer (Class VIII rank) has the disciplinary powers of a commander of a dependent battalion over medical personnel. He acts for the commandant in the absence of the latter. He supervises generally all arrangements made for immediate care of sick and wounded, appoints one junior medical officer to take charge of the dispensary and to supervise the work of the dispensary *feldsher*.

The official in charge of interior economy is directly under the commandant. He commands the administration personnel and has the disciplinary powers of a company commander.

As in other units in which nursing sisters are employed, one of them is appointed as senior sister and has certain special duties.

The following material is kept ready in time of peace for the mobilization of ambulance trains:—(a) railway material, namely, rolling stock and special stands and cots; (b) intendance material, namely, general equipment and furniture; (c) medical and surgical equipment.

When the trains are ready, some are placed at the disposal of the commander-in-chief of the field forces for work in the area of operations under him; while others are held at the disposal of the headquarter staff at the War Office for work on railways not under his control. The former are

distributed among armies and come under the direction of adjutants-general, although their commandants obey also the orders issued by generals of communications.

In addition to the ambulance trains organized by the War Office, the instructions of 1904 regulate the organization and administration of ambulance trains, provided by the Red Cross Society, other associations and private individuals. Such trains must be under a military commandant, appointed by military authority, and all the regulations for military ambulance trains must be obeyed. A delegate of the society or of the private individual providing the train may accompany the train, and other personnel, provided by the society or individual, perform their duties under his supervision.

The instructions of 1904 also arrange for the formation of improvised or temporary ambulance trains, whenever general evacuation of sick and wounded is imperative. The rules for their organization and administration are, as far as possible, those of the permanent trains, but if passenger carriages are not available, goods wagons may be used, bath and operation room accommodation is omitted, while in place of the special type of kitchen wagon, any kind of railway kitchen wagon may be used.*

Transport of sick and wounded by water.

Lines of evacuation by rivers, lakes, or by sea may be organized, and local steamers may be fitted up and administered as hospital boats (*voenno-sanitarniya suda*), but there are no permanent regulations governing this service. In 1904 certain temporary instructions were issued and the hired steamer

* In the Manchurian campaign, mixed permanent and improvised trains were employed, carrying about 300 sick and wounded, and arranged as follows: in order behind the engine.

- 1 Passenger coach, 1st class, for commandant and M.Os.
- 1 Kitchen car, specially fitted.
- 1 Passenger coach, 1st class, for nursing sisters.
- 1 Restaurant car, as mess-room.
- 1 Passenger coach, 2nd class, for subordinate personnel.
- 6 Adapted 3rd class coaches for slight cases.
- 6 " " " for serious "
- 1 " " " for operation room and dispensary.
- 6 " goods wagons for invalided cases.
- 5 " goods wagons for stores, bedding, etc.
- 1 " ice car.

Total, 30 cars.

"Novik" was fitted up and employed on the rivers Volga and Kama as a military ambulance boat (*voenno-sanitarni parakhod*). During the Manchurian campaign hospital ships, both military and Red Cross Society's, were sent to or organized in Port Arthur, and floating hospitals on river barges were employed on the Sungari at Harbin and elsewhere.

UNITS FOR SPECIAL SANITARY WORK.

The employment of divisional and brigade bearers in sanitary work has already been mentioned. But special units are organized for sanitary work which are called mobile sanitary or disinfection detachments (*letuchnie sanitarnie ili desinfektsionnie otryadi*). They are employed, both in peace and in war, on the occasion of outbreaks of epidemic disease, such as cholera, plague, dysentery, smallpox, exanthematous typhus and other fevers. They are not, however, definitely fixed in war establishments.*

The best accounts of these units are to be found in the various writings of Dr. Follenfant, of the French army medical service, who was attached to the Russian army during the Manchurian campaign. He informs us that a special personnel of experts in disinfection and methods of chemical and bacteriological investigation, together with a consulting specialist in epidemiology, was attached to the director of medical services of each army, and that both mobile and fixed units were organized for special sanitary duties.

The mobile sanitary units consisted of :

1. Bacteriological columns.
2. Disinfection columns.

Each director of medical services had one of the former and two of the latter at his disposal, while General Trepov, the director of medical services with the commander-in-chief of the field armies, had 2 bacteriological and 4 disinfection columns directly under him. A large number of both classes of columns was also distributed amongst local garrisons and other centres on lines of communication.

* They will probably be included in future war establishments in the proportion of one disinfecting detachment for each infantry division and rifle brigade, and one sanitary detachment for each army corps.

A bacteriological column consisted of :

- 2 medical officers,
- 3 *feldshers* (one a dispensary *feldsher*),
- 6 hospital orderlies,
- 5 transport drivers,
- 5 wagons.

The material carried in the wagons included a dispensary, a portable bacteriological laboratory, a variety of prophylactic and therapeutic serums, incubators and formalin generators.

A disinfection column consisted of :

- 1 medical officer,
- 3 *feldshers* (one a dispensary *feldsher*),
- 6 hospital orderlies,
- 4 drivers,
- 4 wagons.

The wagons contained a small dispensary, steam and formalin disinfecting apparatus.

The column had also 2 wagons and drivers for ordinary stores, baggage and supplies, and 1 for forage.

In addition to these sanitary columns provided by the military authorities, a special railway train for disinfection was organized and equipped by a voluntary aid committee in Moscow. It was composed of 8 coaches, of which one each was specially constructed for officers and officials, for laboratory work, for disinfection (containing a large steam disinfecting apparatus), and for ice-making, while the remaining 4 were used for the subordinate personnel. The equipment of three mobile disinfection detachments was carried in a car attached to this train.

A quarantine station was established at Irkutsk, organized into sections for disinfection, baths, and laundry work, together with barracks for 1,000 men, with accommodation for an additional 24,000 in the neighbourhood.

Laundry wagons of modern design were also employed in connexion with sanitary work in the field.

UNITS FOR THE SUPPLY OF MEDICAL AND SURGICAL EQUIPMENT.

There are two classes of units corresponding to the British advanced depots of medical stores. They are the field

dispensaries and the temporary dispensaries. A field dispensary (*polevaya apteka*) is for the purpose of replenishing the medical and surgical material in the medical and veterinary units. Field dispensaries are established at selected points in the area of operations and contain supplies of dressing material, medicines, surgical instruments and apparatus and dispensary equipment. They are replenished under arrangements made by the directorate of medical services at the War Office. A sum is allotted to the pharmacist in charge, for purchase of material for packing articles and is regularly accounted for by him. The pharmacist in charge may also hire labour and transport material if necessary, or if local resources are not available, he applies to the local civil or military authority and reports the action taken to the medical inspector of the army. He holds a general survey of all material at the end of each month, and reports the result to the medical inspector and also to the War Office. He requisitions, however, on the latter for any material required whenever occasion arises.

In field dispensaries is kept a stock of surgical instruments and apparatus, equal to one-fifth of the total equipment of this nature in the field hospitals and divisional *lazarets*, and, in addition, a general reserve of one-quarter of the instruments most likely to be damaged, such as knives, scalpels, common and chain saws, scissors and needles. An instrument repairing shop forms a section of each field dispensary, with a foreman cutler and skilled instrument repairers, serving under contract made by the War Office. Damaged instruments sent in from medical units are immediately replaced by new ones, while they are being repaired.

The official in charge of a field dispensary (*upravlayayuschi polevoyu aptekoyu*) is a pharmacist of Class VI rank (1st pharmaceutical grade). His assistant is of Class VIII. The full establishment of a field dispensary is given in Appendix I.

If field dispensaries are established at a distance from permanent medical and surgical stores, so that the forwarding of supplies from the latter leads to delay and is a matter of difficulty, the general officer commanding an army may arrange with the War Minister for the establishment of temporary depots of medical and surgical stores (*vremenni aptekni magazin*) at places convenient for the purposes of supply. The personnel and material to be held on charge at these temporary stores are determined as the occasion arises. When a temporary

depot of medical and surgical stores is moved, transport is arranged for by the field medical inspector, who has complete control over all medical supply units. When an army is operating at a considerable distance beyond the frontier and when such a course is possible, the stores of temporary depots may be replenished, under the orders of the field medical inspector, by local purchase. Otherwise they are replenished by requisitions on the War Office.

FORTRESS TEMPORARY HOSPITALS.

Fortress temporary hospitals (*kryepostnoi vremenni gosptial*) are units which are organized for the purpose of supplementing, in time of war, the permanent fortress hospitals. They are only opened when the beds in the peace establishments and units are insufficient. They are units of definite organization, and each is intended to accommodate 20 officers and 400 men, but the temporary hospital, or rather *lazaret*, for the fort at Dubno is of special organization and is for 5 officers and 100 men only. The number of temporary hospitals organized for a fortress is fixed according to the war strength of its garrison. The rule is to have one hospital bed for every eight men. The number for each fortress is fixed in time of peace by the War Office.

These temporary fortress hospitals are directly under the principal medical officer of the fortress. They are established in government or other buildings or in hospital tents, special grants being allotted for rent of buildings. Local transport, for the provision of which money is also allotted, and one ambulance wagon are attached to each hospital. These units are administered in the same manner as a field hospital.

Temporary hospitals or sections of hospitals may be opened in isolated forts by the principal medical officer of a fortress, by direction of the chief of the staff, with material obtained from the regular or temporary hospital stores.

The establishment and equipment of a fortress temporary hospital are given in Appendix I.

PERMANENT HOSPITALS, LOCAL LAZARETS, &c.

All permanent military medical establishments in a military district occupied by an army are under the army commander.

In addition, those hospitals which are under the civil government authorities receive sick and wounded from the armies in time of war.

VOLUNTARY AID UNITS.

Voluntary aid units may be provided not only by the Russian Red Cross Society, but by private individuals, municipal and other public bodies, as occasion arises. They permeate every zone of medical work in the field, but, unlike the organization of voluntary aid in other continental countries and in Japan, they form no definite units which can be registered and inspected in time of peace, and, for purposes of war, their provision depends upon chance and improvisation. Further details on this point are noted in the next chapter.

ARRANGEMENTS FOR THE MOBILIZATION OF MEDICAL UNITS.

The mobilization arrangements of the Russian army medical service are of interest on account of the variety of sources from which personnel, material of all kinds and transport are drawn to make up the war establishments and medical units. A general scheme of mobilization for the medical service is prepared at the War Office, communicated to district commanders, and completed locally.

In the case of the regimental medical service, the regimental *lazarets* of combatant units other than reserve and fortress units have, in addition to material which is common to both peace and war equipment, material comprised only in peace equipment, which becomes on mobilization superfluous, and material comprised only in war equipment. The latter material is issued to the units in time of peace and stored by them. The material which is superfluous on mobilization forms part of the material of divisional *lazarets* or field hospitals, and is passed on to them. The *lazaret* equipment of reserve and fortress units is all war equipment.

Each infantry division keeps in mobilization stores the material for the three divisional medical units, namely, the *lazaret* and the two mobile field hospitals. The complete equipment, however, of only one divisional field hospital is stored in time of peace, that of the other and of the divisional *lazaret* is only partially complete, as it is completed on mobilization by the superfluous material of the

regimental *lazarets*. The divisional medical mobilization stores are placed under the charge of one or more of the regiments of the division, as may be convenient. In the case of an infantry division, composed of reserve units, the mobilization equipment for the divisional medical units is under the supervision of the commander of the local or reserve cadre brigade, the *lazaret* equipment being stored by the reserve battalion quartered in the place of mobilization, and that of the field hospitals in places determined by the reserve cadre commander. Most of the material of a brigade *lazaret* is stored at brigade headquarters under the brigade staff, but some articles have to be acquired by purchase on mobilization.

Material for the army field hospitals and the sick and wounded transport columns is kept at intendance depots; and that of fortress temporary hospitals at the permanent hospitals in fortresses, or if there is no permanent hospital, at a local *lazaret* or special depot.

The transport material of the divisional *lazaret* and divisional field hospitals is also kept, according to arrangements made by divisional commanders or reserve cadre brigade commanders, by one or more regiments of a division or by one or more reserve units, as the case may be; the transport material for army mobile field hospitals and sick and wounded transport columns is kept in the intendance depots. The same mobilization store arrangements are also made for the clothing and equipment of the personnel of the *lazaret* or hospital detachments and bearer companies.

Certain stores, such as medical comforts and other stewards' stores, are obtained on mobilization by purchase, but preserved rations for all the medical units are maintained regularly in mobilization stores and turned over as required, arrangements being made for periodical inspection and money allotted for the replacement of articles which become useless.

At certain intendance depots an establishment of non-commissioned officers and rank and file is maintained in peace to act as "instructors" in the method of mobilizing the medical units, but the general direction of mobilization is under the officer in charge of the hospital department or section of the military district staff.

As regards personnel, nominal rolls of medical, veterinary and pharmacist officials who are detailed for duty in field units are kept at the War Office. Three medical officers are

selected from amongst the medical officers of each division, whose duty it will be to mobilize the divisional medical units of their division. They are transferred from their regimental units for this purpose on mobilization.

Medical and pharmacist officers detailed to the establishments of field units, other than their regimental units, are replaced in the regiments by medical officers and pharmacists from the reserve.

Feldshers are detailed to field medical units on mobilization by the military district medical authorities. Some of the regimental *feldshers* are detailed to assist the medical officers appointed to mobilize divisional medical units. They are replaced in their regiments by *feldshers* from the reserve.

The military district staff also keeps in time of peace a nominal roll of officers and non-medical officials, for divisional medical units, army medical units, and fortress temporary hospitals.

Clerks and the subordinate ranks generally of hospital detachments and bearer-companies are appointed to the medical units by arrangements made at the War Office, but, in the case of a rifle brigade *lazaret*, the appointments are dealt with in the brigade; the bearer-companies of divisional *lazarets* are formed from the cadres maintained in the regimental units of the division.

Nursing Sisters are supplied under an agreement between the Russian Red Cross Society, and the War Office.

Horses are supplied to medical units, other than regimental, according to the mobilization lists of conscript horses kept at the War Office, but the horses and transport of regimental *lazarets* and rifle brigade *lazarets* form part of the regimental or brigade transport.

On mobilization then the following arrangements are at once put into operation:—(a) the regimental *lazarets* and receiving rooms are closed, all sick being transferred to permanent military hospitals, local *lazarets* or civil hospitals, and the regimental *lazarets* are converted into regimental *lazarets* on a war establishment; (b) divisional medical units are mobilized by the three medical officers selected for the purpose in peace time; (c) army field hospitals and sick and wounded transport columns are mobilized, the former by the medical officers detailed to command them and the latter by the officer appointed commandant; (d) superfluous stores

of regimental peace *lazarets* are transferred to the depot battalion or to general government stores; (e) fortress temporary hospitals are formed gradually and concurrently with increase in strength of the garrison, or according to actual requirements.

EMPLOYMENT OF FIELD MEDICAL UNITS ON THE FIELD OF BATTLE.

The Russian regulations devote a special chapter to this subject, some of the principles of which have been indicated in the previous headings, such, for example, as the formation of main dressing stations by divisional or brigade *lazarets*, and advanced dressing stations by *lazarets* of infantry regiments and battalions. The *lazarets* of other units form dressing stations only when the units are acting independently. When they are co-operating with infantry their *lazarets* reinforce the main or advanced dressing stations. In the case of a large body of troops to which no divisional *lazaret* is attached, a main dressing station is formed by the *lazaret* of one of the regiments or of an independent battalion.

In actions in which there are large numbers of casualties, special dressing stations may be opened under the personal efforts and arrangements of the army inspector of hospitals.

The general rules regarding the selection of sites for dressing stations are that they should be established near water, in buildings or tents, and in places protected from the enemy's fire. They should not be placed near the reserves, as the sight of masses of wounded coming in is apt to affect the *moral* of the men.

The sites for the advanced dressing stations are chosen by the regimental senior medical officers, under the orders of regimental commanding officers; the site for the main dressing station of a division by the divisional administrative medical officer under the direction of the divisional commander; sites for special dressing stations are selected by the army inspector of hospitals in consultation with the field medical inspector.

Straw or hay is collected at the dressing stations, and the *lazaret* baggage wagons (*povoski*), with any empty baggage wagons of the train and local vehicles obtained by requisition, are also drawn up there. Orderlies, in number according to

probable requirements, are told off from combatant units for work at the dressing stations. The stations are distinguished in the daytime by the national flag and the Red Cross flag, at night by red lamps.

The general supervision of dressing stations is the duty of the army inspector of hospitals; if he is not present on the field, the senior medical officer with the troops supervises them. The duty of general direction of dressing stations includes demands for medical personnel and material, if necessary the detaching of surgeons and *feldshers* from combatant units and field hospitals to do duty at main dressing stations, and distributing personnel and material of all kinds according to the requirements of each dressing station. The inspector of hospitals also endeavours to ensure the regular transfer of wounded from advanced dressing stations to main dressing stations, and their removal to field hospitals and sick and wounded transport columns. He also establishes communication between the advanced and main dressing stations. After each action, he submits reports of work done and of expenditure for the information of the adjutant-general, and is responsible for returning to their own units medical officers, *feldshers* and others, who were detached for duty at the dressing stations.

In fortresses the direction of dressing stations is in the hands of the principal medical officer, who opens dressing stations under the orders of the chief of the staff.

The normal method of employing the medical units of an infantry division is as follows:—

Area of work of regimental bearers and part of divisional bearer company is from the fighting line to a depth of about $\frac{2}{3}$ miles behind it, where the advanced dressing stations are placed.

Area of work of regimental ambulance wagons and part of divisional bearer company is from the advanced dressing stations to the main dressing station, which is placed at a distance of about $1\frac{1}{3}$ miles (2 *versts*) from the fighting line.

Area of work of divisional ambulance wagons is from the main dressing station to the divisional field hospitals, placed at a distance of about 4 *versts* or $2\frac{2}{3}$ miles behind the fighting line.

The general plan is for regimental bearers to work in front of regimental wagons, divisional bearers in front of divisional

wagons, divisional bearers as well as regimental carrying wounded from the fighting line to the advanced dressing stations, but regimental bearers on no account being employed further back. The divisional *lazaret* bearers may also be employed to carry wounded from the advanced to the main dressing stations.

If there is no necessity for the employment of both divisional and regimental bearers, the former may work alone, the latter being, except in the case of certain artillery units, combatants. On the other hand, stretcher work in action may be performed by regimental bearers alone. This would be the case when an engagement had developed unexpectedly, before the divisional *lazaret* had come up. On such an occasion the bearers of units not engaged would be ordered to assist, if necessary, in the collection of wounded. When the divisional *lazaret* comes up, the regimental bearers may either continue to help the divisional bearers in carrying wounded as far as advanced dressing stations, or they may rejoin their units. It would not, therefore, be correct to regard the regimental *lazarets* and regimental bearers as invariably a first line of assistance and the divisional *lazarets* and bearers as invariably a second line, although normally they occupy these positions relatively.

In estimating the length of time required to collect wounded to advanced and main dressing stations and remove them to the divisional field hospitals, bearers are usually considered to move at a constant speed of 2 *versts* ($1\frac{1}{2}$ miles) an hour, wagons at 4 *versts* ($2\frac{2}{3}$ miles) an hour, halts and delays being allowed for in each case.

When an action is expected the regimental *lazarets* are completed by the regimental stretcher detachments, the bearers leaving their companies either on the demand of the senior medical officer or by the direct order of the regimental commander. The bearer detachment then marches in front of the wagons, until the place chosen for an advanced dressing station is reached. Here they discard arms and ammunition, take stretchers and surgical bags, and put on brassards. If the stretcher work is being performed by regimental bearers only, an officer is posted at each advanced dressing station, whose duty is to supervise the stretcher and wagon work generally, but especially to see that the bearers do not go further back, and to give orders relative to the further transport of the wounded to the main dressing station. Each

battalion furnishes a non-commissioned officer, who works under the officer at the advanced dressing station in the capacity of a section commander of the stretcher detachment. Both commander and section commanders have whistles for giving directions, although they are not intended for use during an action lest confusion with other signals should arise. The arrangements for collection of the arms and ammunition of the wounded are that, in practice, ammunition remains with regimental units, while arms and accoutrements go with the patient to the field hospitals and further, until they can be transferred to the commander of the nearest post on lines of communication.

The light general service wagons or carts, as well as the stretchers with their bearers and *feldshers* are sent out from the advanced dressing stations to the fighting line under a junior medical officer. The senior medical officer always remains at the dressing station.

The company *feldshers* remain with their companies, render first aid to wounded and hand them over to the stretcher bearers; when practicable, they bring the more serious cases to the notice of a medical officer.

The ambulance wagons keep, if possible, under cover, those belonging to the regimental *lazarets* being collected at the advanced dressing stations, and those of the divisional *lazaret* at the main dressing stations. The former carry wounded only as far as the main dressing station. After unloading they return at once to the advanced dressing station of their unit. The ambulance wagons of the divisional *lazaret* are loaded at the main stations and carry wounded to the field hospitals, but they may also be employed in the zone allotted to the regimental wagons.

As wounded arrive at the main station they are classified by a medical officer into three categories; (i) for immediate operation, (ii) for lying down accommodation in wagons, (iii) slightly wounded. Slightly wounded return to their units after being given refreshment and dressed. The others are temporarily taken care of until arrangements for further transfer are made.

The medical officer in charge of a dressing station must give to a wounded officer a certificate regarding his injury and any operation performed, taking the form out of a book for officers which is kept at dressing stations. If circumstances should

prevent the certificate being given at a dressing station, it may be given at the field hospital, to which the officer is sent.

All wounded receive at the dressing station food, drink, and, if necessary, clothing. They must also be sheltered from inclement weather or the heat of the sun, and rest and quiet must be secured for them. Any necessary operation is, if possible, deferred till after the wounded man has rested and slept; in fact, it is laid down that a wounded man is not to be sent further back without being giving refreshment and the opportunity of sleep. Men mortally wounded are placed in a separate section to which special *feldshers* and attendants are detailed. The dead are removed without loss of time to a mortuary section.

In order to clear the dressing stations, the mobile field hospitals are brought up, in whatever number may be required. They are opened in places out of range of the enemy's fire.

The *lazaret* baggage wagons and the transport of field hospitals and of sick and wounded transport columns which come up to or near to the field of action, as also any other vehicles which may be detailed or collected locally for the purpose under the orders of the commander of the division or other tactical unit, may be employed for conveying wounded from the field to dressing stations, to the nearest field hospitals, to stations on a railway line, or to quays on rivers, etc.

The amount of transport available for transferring wounded from the divisional field hospitals to other medical units would normally consist of 10 ambulance wagons, namely, eight of the divisional *lazaret* and two of the divisional field hospitals, and 38 baggage wagons of the latter.

As has been already noted, cavalry divisions must depend on their own regimental *lazarets* and any auxiliary transport they may obtain for the temporary disposal of wounded. The army inspector of hospitals makes the arrangements, as necessity arises, for clearing cavalry divisions of wounded. If the work of bringing wounded to field hospitals or railways cannot be carried out by regimental *lazarets*, sick and wounded transport columns would be used.

THE EVACUATION OF SICK AND WOUNDED.

The work of evacuating sick and wounded (*evacuatsiya*) is carried out in the area of field operations and on the lines of

communication of each army by the adjutant-general, and in the home territory by the War Office. If medical units and establishments in an area of operations have come under the jurisdiction of a military district authority, that authority has also to make the arrangements for evacuation within the area.

For the general purpose of evacuating sick and wounded the territory in which an army is operating is divided into what are called clearing or evacuating zones. Zones of the first line are termed field zones; those of the second line rear or lines of communication zones. In the home territory, interior evacuation zones are mapped out, conforming to existing conditions as regards railways, waterways and other available means for disposal of sick and wounded. These are, more strictly speaking, distribution rather than evacuation zones. In each zone, an evacuation or clearing commission (*evacuatsionnaya kommissiya*) is formed for controlling and carrying on the work of evacuation. These commissions are designated field (*polevaya*), rear (*tilovaya*) or interior (*vnutrennaya*) commissions according to the zone they control. Each is an executive body, having personnel and other means placed at its disposal for carrying on its duties.

In addition, there is a chief evacuation commission (*Glavnaya Evacuatsionnaya Kommissiya*) at the War Office formed of officers of the headquarter staff, members of the chief military sanitary committee, the army medical directorate and the central committee of the Red Cross. The function of this commission is advisory.

In order to assist clearing commissions in the transport, disposal and care of sick and wounded, government and circle executive committees (*komiteti*) are formed in each government district of the empire. The members are appointed by the district governors and work in the districts or circles to which they belong.

Field and rear clearing commission consists of a president, who is a colonel or general officer, his assistant (a field officer), a senior medical officer, a representative of the inspector general of communications, the commandant of a line of communication post (if the commission is quartered at an *étape*), and a delegate of the Red Cross Society.

The president is subordinate to the field inspector of hospitals or to the officer performing the duties of inspector of hospitals of a district, according to circumstances.

Interior clearing commissions are formed by commanders of military districts, on the same lines as the field and rear commissions; and individuals whose occupation or position is likely to make them of use in the work of evacuation may be invited to become members. The presidents of interior commissions are under the district inspectors of hospitals.

The president (*predsedatel*) of a clearing commission distributes the work among the members according to their special technical knowledge. He obtains from the delegate of the Red Cross Society information regarding the Society's undertakings, and gives instructions as to where and how voluntary aid can be utilized. He has also the right to communicate with the chief commissioner or other delegate of the Red Cross Society either directly or through the Society's delegate on the commission.

He has the powers of a commandant of a hospital with regard to personnel and units or establishments under the control of his commission. He has the power to approve expenditure up to £100 approximately at a time.

He receives from hospital establishments, to which the commission evacuates sick and wounded, returns of the number of vacant beds available. District and circle executive committees also send information as to the number of men which they can dispose of in their area.

The assistant to the president has, as a special charge, the superintendence of stores other than medical and surgical material.

The senior medical officer (an official of Class VI rank) directs the medical personnel doing duty at collecting or evacuating stations and hospitals connected with the commission—(the nature of these units is detailed below)—and also the medical personnel of any sick and wounded transport column or ambulance train working under his commission. One of his special duties is to classify and select cases for evacuation. He has powers similar to those of a divisional administrative medical officer.

The member of the commission, who is appointed by the general of communications, assists in questions connected with the conveyance of sick and wounded by rail and water. He would conduct all business connected with forwarding and receiving communications regarding the railway trains required, the equipping of railway wagons and river boats,

etc., the issue of "march routes" for ambulance trains of all kinds and for river steamers employed by the medical service.

The commandant of the line of communication post has first knowledge of the return of sick and wounded transport columns, and can make arrangements for their being temporarily available locally for the purpose of evacuation. He is able to arrange within his *étape* zone for supplies, wagons, labour and military escorts for convoys of sick and wounded. As a delegate of the president he also issues march routes for the convoys.

Under the direction of the president of the commission, the delegate (*predstavitel*) of the Red Cross Society makes arrangements with the means at his disposal to help in the work of evacuation and to supply sick and wounded with necessities and comforts.

The office of the commission is under the supervision of a secretary chosen by the president and confirmed in his appointment by the army inspector of hospitals.

The place at which a commission takes up its work is determined by the adjutant-general of the army to which it belongs or by the War Office, according to the particular zone for which it is appointed.

At each place so selected in the field and rear zones there is an evacuating or collecting station (*sborni punkt*) under the direct supervision of the commission. In interior zones commissions make such local arrangements as may be suited to requirements, and would establish stations which would be of the nature of distributing stations, such as the *points de répartition* of France, or the *Zerstreuungstation* of Austria-Hungary.

Special hospitals are established in connexion with evacuating or distributing stations for the reception and temporary care of sick and wounded. The men are classified in them according to the nature of their sickness or injuries, with a view to their subsequent distribution, and they also receive necessities for the journey at these hospitals. Men unfit for further transport remain in them for treatment. The formation and function of these hospitals and the station generally are essentially the same as the rail-head evacuation station of the Austro-Hungarian field medical organization, or the *hôpital d'évacuation* of France.

The personnel working in the hospital of an evacuating

station consists of the senior medical officer of the commission, his assistant, and other medical officers in number according to requirements, 7 *feldshers*, 45 sick attendants, personnel for interior economy, and 6 nursing sisters.

In evacuating stations, depots (*skladi*) of hospital equipment and medical and surgical material are established, with two storekeepers as part of the personnel of the evacuating station, under arrangements made by the inspector of hospitals and the field medical inspector.

An evacuating station is administered in much the same way as a field hospital. The assistant to the senior medical officer is in immediate charge; he is a medical officer of Class VIII official rank, and has thus the status of a senior medical officer of a field hospital.

The transport available for evacuation from evacuation or collecting stations is as follows:—

1. By road:—

- (a) Sick and wounded transport columns.
- (b) Improvised transport columns of empty wagons belonging to medical units.
- (c) Improvised transport columns of empty wagons of army supply columns.
- (d) Local vehicles.

2. By rail:—

- (a) Military ambulance trains.
- (b) Improvised ambulance trains.
- (c) Military and goods trains returning from the front and adapted for carriage of sick and wounded.
- (d) Passenger trains.

3. By water:—

Steamboats and other vessels, adapted for accommodation of sick and wounded.

A certain amount of transport, determined by requirements and local conditions, is placed permanently at the disposal of evacuation commissions.

Personnel for improvised transport columns and ambulance trains is detailed by the president of a commission, either from personnel attached to the commission specially for this purpose or from personnel of the hospitals at the evacuation stations.

Transport and personnel may also be placed at the disposal

of the president of a commission by the Red Cross Society. Such transport and personnel work only under the superintendence of the president or of persons detailed by him for the purpose.

The general system of evacuation is as follows:—Wounded from dressing stations and sick from their units are transferred to divisional field hospitals; from these they are sent to the collecting or evacuating station of the nearest field evacuation commission; the commission takes them over, accommodates, classifies and sends them for further treatment either to medical units or establishments in the field zone or to the evacuation stations of the commissions on lines of communication. If rear evacuating zones have not been fixed, the sick and wounded selected for further removal are sent direct to the evacuating (distributing) stations of interior commissions.

“Rear” commissions, on receiving sick and wounded from the field zone, re-classify them at their evacuating stations and send them either to medical units or establishments in their own zone or further back to be dealt with by interior commissions. The “rear” commissions also arrange for clearing the medical units in their own zones.

An “interior” commission receives sick and wounded from all zones nearer the area of operations, classifies them at their evacuation or distributing stations and either distributes them among medical establishments in its own zone or sends them on to other interior zones. If no evacuation station is opened under the commission, sick and wounded arriving are sent off at once to medical establishments in the zone.

Sick and wounded are distributed for treatment to military medical establishments, permanent or temporary, to hospitals of the state civil authorities, or to *lazarets* of the Red Cross Society.

Most stress is laid on the correct classification of patients at evacuating stations. This is considered an important factor in the work of evacuation and official “Instructions for classification of sick and wounded” are in force. The character and extent of injuries, the character and severity of diseases, the general condition of the patient and his fitness for transport by one or other method by rail, waterway or road, lying-down or sitting up, are points which have to be taken into account. Attention is also directed to the

necessity of care in dealing with the evacuation of men likely to recover quickly and completely. Such men are to remain in hospital as near the field armies as possible. Others, whose treatment is likely to be prolonged, are to be sent, if possible, far back so that they do not fill up the hospitals near the front. Precautions must be taken to avoid conveying infection to men coming up the line or to the inner districts of the empire.

The immediate direction (in home territory) of transport of sick and wounded by rail or water is the duty of the district staffs, who make arrangements for the provision of food to the patients during their journey and form medical detachments (*sanitarnie otryadi*) to take charge of them *en route*. A medical detachment for charge of from 20 to 50 invalids would consist of one medical officer, two *feldshers* and not less than five sick attendants ; for a less number and for those who require little attention or who are being sent on a short journey, the medical detachment may be weaker ; for twenty or fewer slight cases, for example, one *feldsher* and two sick attendants suffice. These detachments may be furnished by the Red Cross Society. As a rule a detachment works regularly on a certain route and its personnel is permanently detailed for duty on it.

In order to prevent confusion, the necessity for regular communication between commissions on the lines of evacuation and between them and district and circle executive committees is insisted on, especially as regards notification of accommodation required and available, number of cases sent on and the nature of their sickness and wounds so far as it affects transport and accommodation.

Commissions forward weekly returns to the War Office, in the shape of nominal rolls of men who have passed through their stations, with particulars as to their destination.

District and circle executive committees carry out the orders of evacuating commissions, as well as the direct orders of the War Office, as regards the reception and distribution of sick and wounded and their conveyance to provincial and other civil institutions of the government district or circle, and also as regards handing men over to the care of private individuals.

An executive committee is formed in each government district, province or circle in the general zone of distribution.

It may consist of one central and several affiliated sections, and presidents of local branches of the Red Cross Society, local medical practitioners and other prominent inhabitants are invited to join these committees. Sick and wounded may be distributed to the homes of private individuals, who receive pecuniary compensation according to fixed scales. This distribution is carried out by the "interior" evacuating commissions. Localities in which men are so distributed are selected by the War Office on the commencement of a campaign, according to the locality of field operations and the lines of communication. Convalescents, for example, are dealt with in this manner; one or more men are quartered in a house and live with the inhabitants, who provide bed, food and washing. The daily rate of compensation is settled by the War Minister in agreement with the Minister of the Interior. Medical attendance on soldiers so quartered is provided by local medical men, *feldshers*, nursing sisters, etc. Persons appointed for this duty receive remuneration according to the amount of work required of them by the evacuation commission. Supervision over men distributed amongst inhabitants and the handing over of men who recover to local military authority are entrusted to medical men, who work in co-operation with the local police. Officers and non-commissioned officers, who have nearly recovered but are not fit to return to the field, are appointed to assist them. Men, who have recovered, are sent once a week to the nearest circle commandant, and he sends them on for duty with the depot units according to War Office instructions.

FIELD MEDICAL EQUIPMENT.

Surgical Instruments and Dressings.

The newest designs for surgical instruments have been adopted. The instruments are constructed on aseptic principles; they are issued in instrument cases of new design, bedded in ebonite, enclosed in plated cases, suitable for trays, and carried in outer cases of oak, covered with brown canvas.

The medicines are prepared, whenever possible, in form of compressed tabloids.

The surgical dressings are all packed in compressed packages. The materials used are restricted to the following bandages and dressings:—

Bandages.

Aseptic gauze, three sizes	{	7.1 m.	×	0.09 m.
		" "	×	0.13 m.
		" "	×	0.18 m.
Starch bandages, three sizes.	{	7.1 m.	×	0.09 m.
		" "	×	0.13 m.
		" "	×	0.17 m.
Flannel bandages	...	" "	×	0.17 m.
Triangular calico bandages.				

Dressings.

Aseptic absorbent wool.

Sublimate wool.

Jute, tow or ordinary wool for padding splints, etc.

Sublimate or aseptic gauze.

Different coloured papers are used in the packing of the various articles composing the surgical dressings. Thus:—

White packages mean plain aseptic absorbent wool or gauze bandages; *pink packages* mean sublimate wool or sublimate bandages; *green packages* mean starch bandages; *blue packages* mean ordinary jute or wool for padding splints.

Compressed sublimate gauze dressings are packed in pieces cut to the size of a single dressing and enclosed in soldered metal boxes, or in packages similar to the compressed wool. Each piece = $\frac{1}{2}$ square mètre of gauze.

Approximately the results of compression, so far as transport is concerned, are that 360 grms. (about $\frac{4}{5}$ lb.) of cotton wool are packed in a package measuring about 8" × 4" × 1 $\frac{1}{2}$ ".

Taking the distribution of the material with an army in the field in detail, the Russian medical service provides the following to accompany individuals, battalions and brigades:—

1. A first field dressing for all ranks.
2. A surgical haversack for the stretcher bearers.
3. A pair of saddle-bags for each medical officer.
4. Five boxes of medical and surgical equipment carried in one 1-horsed wagon, with each battalion of infantry.
5. With each brigade three boxes in one 1-horsed wagon and seven boxes in one 2-horsed wagon.

The contents of these various packages are given in Appendix III.

Special Sanitary Equipment.

In addition to the medical and surgical material, as detailed in Appendix III, steam disinfecting apparatus, and field bacteriological and chemical laboratories form part of the field equipment.

The disinfecting apparatus for fixed stations differs little from that generally adopted in other countries. The disinfecting apparatus intended for field service is a somewhat bulky, upright apparatus, intended to be placed on any convenient form of carriage. It weighs 28 *pood* (about 9 cwt.).

The chemical or hygienic laboratory is contained in two strong panniers, measuring approximately 22" \times 14" \times 14", and containing all the requisites for chemical and bacteriological analysis of water, milk, food supplies, etc.

The bacteriological laboratory is also contained in two similar panniers and is called the *Veterinary Bacteriological Laboratory*. It is supplemented by a third pannier, smaller and more portable, measuring 20" \times 12" \times 10", intended for use with each cavalry regiment.

A Zeiss microscope accompanies these laboratories.

Stretchers and litters.

Several forms of stretchers and litters are used. The principal regulation stretchers are:—

- (1) A stretcher with removable traverses, having rings for side poles and metal legs about 9" long fixed to them. The side poles are round and slip into the hem of the canvas cot.
- (2) A stretcher with a folding leg attached to the traverse and with the poles jointed by a strong hinge in the middle. This stretcher folds into a package of smaller dimensions than type (1).
- (3) A stretcher, more of the nature of a bed cot, with stout wooden foot and head pieces carrying stout 18 inch long wooden legs mortised into them, and having round holes for the insertion of side poles.

The poles of all these stretchers are 2 inches in diameter.

The wheeled litters used are similar to the Ashford litter for carrying stretchers.

Transport material.

The regulation ambulance wagon is somewhat similar to the British Mark V ambulance wagon. It carries four men lying down on stretchers, and is a 4-horsed wagon.

The regulation army cart is also fitted up by improvised methods for carrying two lying on stretchers. This is a small 1-horsed cart and it has to have special props to widen and lengthen it in order to enable it to carry the stretchers. In the Manchurian campaign a cover was fitted to the regulation army cart for the protection of sick and wounded from sun and rain.

A two-wheeled light ambulance cart, known as the Finland ambulance cart, was also used in Manchuria. It was sent out at the expense of the Red Cross Society.

A 2-horsed omnibus wagon for the conveyance of non-mounted personnel, similar to that used in France and Germany, forms part of the transport material of mobile field hospitals.

The wagons used for carriage of hospital material is also a two-horsed wagon, without cover, but the general baggage and equipment of field hospitals are carried in the universal pattern type of army cart.

Hospital Tents and Huts.

The tents used in mobile units have already been noted. In addition to them, a variety of huts, including the Mongolian *Kibitka* and the Doecker hut have been used in special expeditions. The Doecker hut is employed in Russia for a variety of purposes and to a very wide extent in connexion with the provision of hospital wards and shelters for sick and wounded in time of war, national calamities and epidemics.

CHAPTER IV.

THE ORGANIZATION AND RESOURCES OF VOLUNTARY AID.

Origin of the Russian Red Cross Society.

The employment of voluntary aid in connexion with the medical service of its army during war has been recognized in Russia since the time of the Napoleonic wars, when, at the beginning of last century, the Tsar, Alexander I, formed a committee for aid to wounded, which carried on regular work during the campaigns of that period.

The next occasion on which voluntary aid came into prominence was during the Crimean War, when nursing sisters of the community of the Exaltation of the Holy Cross (*Krestovozdvijenskaya*) worked in the area of operations and aided wounded and sick soldiers of both belligerents.

With these traditions, influential persons in Russian social life took up the Red Cross movement, inaugurated by Dunant in 1863, with enthusiasm; under the patronage of the Empress Marie Alexandrovna, a Russian National Aid Society for sick and wounded in war was founded, and received Imperial sanction on 3rd May, 1867. In 1876 it took the name of "The Red Cross Society of Russia."

Statutes of the Red Cross Society.

The statutes of the Society comprise 139 paragraphs in nine sections, dealing with the objects of the society, its resources, legal or civil rights, personnel, scope of work of its different branches, investment and use of capital funds, reports, general assembly, work of the society in war.

Object of the Society.

The object of the Society is to aid the regular military organization for care of sick and wounded in war, and, in order to prepare itself for this duty, to undertake in time of peace: (*a*) active measures to provide as far as possible for the work it will be called upon to perform in war; (*b*) the duties of a soldiers' and sailors' help society, by subsidising pensions or giving donations to invalided men, unable to earn a livelihood, and in other ways; (*c*) help to the victims of public calamities, or of war waged by foreign countries; (*d*) collection of funds and material.

Resources.

The resources depend on annual subscriptions, donations of money and material, revenues of various kinds from State sources, or sanctioned by law. Amongst the State sources of revenue, given to the society, may be mentioned the monopoly of the sale of picture postcards, a percentage tax on public or private entertainments, stamps on railway tickets, and surcharges on telegrams.

Civil Rights.

The Society has the civil rights of an incorporated society. It is exempted from stamp duties and taxes on contracts and other public acts, and is permitted to place collecting boxes in churches and other public places with the consent of the ecclesiastical and police authorities.

It has the sole right to use the emblem of the Red Cross, and issue Red Cross brassards.

Membership.

The membership of the Russian Red Cross Society consists of honorary members, benefactors, subscribers or effective members, and co-operating members. The honorary members and benefactors are members of the imperial family, or persons who have performed eminent services on behalf of the objects of the society. The subscribers or effective members are persons who subscribe 10 roubles (about £1 1s.) annually or give a single donation of 200 roubles (20 guineas) to the Central Committee, or persons who subscribe 5 or 10 roubles according to local rules to a local committee, or give a donation of £10 10s. to it.

The co-operating members are persons who subscribe 3 roubles (6/6) annually or give a single donation of 60 roubles (£6 6s.) to the Central Committee, or who subscribe 1 to 3 roubles annually or give a donation of 25 roubles to a local committee, or who perform gratuitous services on behalf of the society in place of subscription or donation in peace or war.

Administration.

The administration of the society is in the hands of a central committee with provincial and government district committees. The central committee sits in St. Petersburg

and has control over the whole society and its branches. The provincial and district committees sit in Moscow and in the capitals or principal towns of provinces and districts. In addition to these, local committees can be formed at any place which may be considered convenient.

Provincial and government district committees may be formed whenever the number of subscribing or effective members amounts to 30 in the province or government district, and local committees when the number is at least five. The sanction of the governor of the province, district or locality must be obtained in either case. In this respect several local committees may be formed in large towns. All committees must announce their formation, send in a nominal list of subscribing members and submit annual reports. All members of committees give gratuitous service.

The central committee is formed of 25 members elected at a general assembly, and includes a president and two vice-presidents, selected by the Royal patron from names submitted for the post. Six members retire annually in rotation, presidents and vice-presidents biennially. Election is by means of voting papers.

The business of the central committee is conducted by a secretary, an assistant secretary, a book-keeper, an accountant and a treasurer with the necessary staff of clerks, etc. These officials are appointed by the president but the appointment of treasurer must be confirmed by the committee. They are paid servants of the Society.

The provincial and Government district committees consist of 8 to 16 subscribing members, a fourth of whom retire annually, with a president and vice-president, treasurer, and assistant treasurer elected biennially. Secretaries and other office officials may be appointed as required.

Local committees make their own arrangements as to membership, etc., except that the local committees in fortified places must be under the permanent presidency of the fortress commandant. Presidents or lady presidents of local committees in towns which are the seat of provincial or district committees are *ex-officio* members of the latter.

Work of the Red Cross Society in Peace.

The work of the Russian Red Cross Society in peace is distributed amongst these several committees and consists

mainly in the maintenance and formation of lay communities of nursing sisters, called "Sisters of Mercy of the Red Cross," in the supervision of their training, in the formation of mobile detachments or ambulances for medical aid in case of public calamities, epidemics, or amongst the poorer and more distant and scattered habitations where medical aid would otherwise be difficult to obtain, and in the organization of depots of material. For this purpose the central committee has considerable power, especially with regard to the formation of lay communities of nursing sisters and the construction of hospitals in connexion with them, while the provincial district and local committees concern themselves mainly with the formation of mobile detachments, ambulances and depots of material. The central committee, for example, can conclude all kinds of contracts and communicate direct with government offices, public institutions, provincial councils (*zemstvos*), etc., and can sanction statutes of lay communities.

Apportionment of Funds.

The funds of the Society are accounted for in four different categories, (a) general funds for current expenditure, (b) reserve capital invested for use in time of war, (c) invested capital for help to invalided soldiers, (d) money given or collected for special objects and ear-marked for these. The general funds include the income from all sources, including the interest on the two classes of invested capital, with the exception of the last category.

Provincial, district and local committees have control over their own subscriptions and funds under the following conditions:—10 per cent. must be sent to the general funds of the central committee; the remaining 90 per cent., after deduction of necessary expenses of the year, is divided into three portions, of which two-thirds go to the reserve capital for war and one third to the reserve capital for invalided soldiers.

Reports and General Assemblies.

Annual reports must be submitted and budgets prepared according to a definite form.

General assemblies of all except co-operating members are held annually, committee meetings monthly. At the general

assembly held in St. Petersburg under the auspices of the central committee, the annual report showing the work and resources of the Society is presented, questions and proposals, brought forward by various committees, are considered, members of the central committee, honorary and "benefactor" members of the society are elected, and accounts passed.

Work of the Russian Red Cross Society in War.

The work which may be undertaken by the Red Cross Society during war is detailed in the statutes as follows:—

- (1) To provide nursing sisters for military medical units and establishments; and, in case of need, male personnel for medical or general duties.
- (2) To replenish, or complete, in case of need, the equipment of military medical establishments by providing such articles as dressings, surgical instruments, medicines, bedding, clothing, utensils, etc.
- (3) To supplement the supplies for dieting sick and wounded by providing a variety of articles and medical comforts not included in the official scales of diets.
- (4) To aid in the evacuation of sick and wounded by providing nursing sisters, medical personnel, equipment and diets for hospital trains, steamers, and collecting or evacuating stations.
- (5) To take over charge of sick and wounded invalided home, and establish local out-patient or other hospitals for them. In the latter case the Red Cross Society receives a daily sum from the State for each patient treated. The sum is fixed in agreement with the Minister for War.
- (6) To organize depots of material in the home territory, on the lines of communication and in the area of field operations.
- (7) In case of necessity and if its resources permit, to carry out the following additional work:—
 - (a) The organization of ambulances for service with the field army, a fixed sum being paid by the State for each sick or wounded man admitted.

- (b) To form temporary mobile detachments for work on the battlefield, and medical detachments to accompany convoys of sick and wounded.
- (c) To organize and maintain sick and wounded transport columns and ambulance trains, receiving in the latter case payment from the State for each patient maintained.
- (d) To assist in the distribution of sick and wounded to places off the principal lines of communication.

On mobilization the Minister of War communicates with the society indicating the kind of work required, and the central committee proposes the measures, which the resources permit them to adopt, for the approval of the Royal patron and afterwards of a special general assembly.

Commissioners and Delegates in the field.

The measures are executed by:—

- (1) Chief commissioners, one for each army.
- (2) Delegates with each administrative command in the field.

The central committee provides the delegates with the money necessary to carry out their proposals, and also with whatever personnel or material they may require. The committee at the same time organizes depots for collecting and forwarding material to the depots established by the delegates in the field or on lines of communication, and arranges measures of assistance in the distribution of sick and wounded within the home territory.

The duties of the chief commissioners and delegates are to carry out in the area of field operations and on lines of communication the measures which the society has agreed upon, and to take general control of the society's personnel, especially of the nursing sisters and the mobile detachments. If the society organizes ambulances, hospital trains or other units, the delegates must supervise them to see that they are supplied with every requirement short of unnecessary luxury.

Organized Units of Voluntary Aid.

In time of war all the resources of provincial or other local committees, in personnel, money and material, are placed at the disposal of the Society. Depots, mobile ambulances, transport columns, etc., are organized within the zone of these committees according to the requirements or nature of the campaign.

As already noted, the Russian Red Cross Society maintains in peace no organized units, as in the case of the Austrian, Hungarian, French and other national aid societies, for the purpose of specific duties in connexion with the army medical service in war. The provincial and local committees are chiefly centres for collecting money for the funds required to improvise and initiate schemes in time of war, but, at the same time, they do important work in peace in connexion with affording medical aid to the poor and to victims of public calamities.

In this respect they are accustomed to organize bodies of men and women and to arrange for the conveyance of material and personnel to places, access to which is difficult on account of climate and distance from centres of population. For example, the local committee of Archangel has sent out for many years medical detachments to work amongst the Russian fishermen on the north coast of Norway and islands of the Arctic ocean; and the Red Cross Society organizes similar detachments for work amongst the emigrants to Siberia. This work is regarded as a special kind of training for aid to sick and wounded in war, as it gives local committees and their personnel experience in developing initiative and acquiring the sort of knowledge needed to adapt things rapidly to different circumstances and to work under unfavourable conditions.

The reserve funds of the society, accumulated annually during previous years of peace, amounted at the commencement of the Manchurian campaign to over £1,000,000. Special subscriptions and donations had greatly increased this amount and as much as £4,000,000 was spent by the Red Cross Society before the conclusion of the war.

The sum was expended in a variety of ways as follows:—

- (1) In supplying hospital tents for the expansion of the regular medical units and establishments.

- (2) In forming rest stations of 10 to 25 beds at the supply posts in the field and at stations on the lines of communication.
- (3) In supplying extra clothing, bedding, medical comforts and other materials not included in schedules of military hospitals.
- (4) In fitting out river boats and steamers for reception and evacuation of sick and wounded.
- (5) In forming complete medical units and detachments for service in the field or lines of communication, namely,
 - (a) Mobile or flying ambulances.
 - (b) Stationary or auxiliary hospitals.
 - (c) Voluntary aid detachments.
 - (d) Stores of material.
 - (e) Laundry units.
 - (f) Disinfection units.
 - (g) Hospital trains.
 - (h) Hospital ships.
 - (i) Bacteriological laboratories.
 - (j) Dental surgeries.
 - (k) Railway rest stations.
 - (l) Special hospitals for insanes.
 - (m) Hospital for nursing sisters.
 - (n) Nursing sisters' homes.
- (6) In a variety of local work in the home territory, such as the formation of rest stations, depots, auxiliary hospitals, and information bureaux.

A mobile ambulance was composed of 1 or 2 doctors, 4 medical students and 8 hospital orderlies, with tents, medical comforts, articles of diet, medical and surgical material, kitchen and hospital equipment, bedding and clothing for 25 wounded. The equipment was carried on 32 pack animals. The personnel was mounted. The number of mobile ambulances organized was 20.

The stationary or auxiliary hospitals were organized and sent out under the auspices of the Red Cross Society by various individuals, provincial, government district or municipal committees or councils. The number of beds in each varied from 25 to 400 or 500. As many as 157 of these hospitals with a total of over 30,000 beds were organized and sent to the

field army or lines of communication. In addition, auxiliary hospitals and convalescent depots with a similar total of beds were organized and opened in European Russia.

The voluntary aid detachments, or "medical detachments" as they are called, were composed of 1 doctor in command, 1 apothecary, 1 quartermaster, 15 nursing sisters and 20 hospital orderlies. They were employed as attendants on convoys of sick and wounded.

The other units organized had no special features different from those of the regular units, except that the expenditure in money and in other respects was more lavish. The point of interest is that they were improvised for the occasion, either by the central or local committees of the Red Cross Society, by private individuals, towns or other communities, or by commissioners and delegates at the seat of war.

In this respect the Russian voluntary aid resources were similar to, although greater and more organized than, the British voluntary aid organizations during the South African war. Although they were placed under the direct control of the military director of medical services, General Trepov, they were employed in work parallel to and in some respects competing with that of the regular army medical service.

The Communities of Nursing Sisters.

The communities of nursing sisters form the chief feature in the organization and resources of the Russian Red Cross Society in peace and in war. The Society establishes and maintains in time of peace a large number of lay communities of nursing sisters, or Sisters of Mercy as they are called. It is also gradually building Red Cross Hospitals in connexion with each community for training the nursing sisters.

The origin of these communities dates from the time of the Crimean War, when, as noted above, the community, called "*Krestovozdvizhenskaja*" sent nursing sisters to the assistance of sick and wounded soldiers. Since then similar lay communities have been established throughout the Empire by the efforts of the Red Cross Society as funds became available, until now practically every province or important town has its community. The number of communities is about 90 of which 36 have special hospitals of their own. The nursing sisters of communities, without hospitals, are trained in civil

or military institutions, by special arrangements with the civil or military authorities.

Each community is completely independent as regards interior economy, but its members are not under any religious vows or other obligations to remain in the communities for life, or to devote themselves to a charitable purpose by renouncing the world. The sisters may leave whenever they feel inclined to, or wish to marry.

The course of training is very complete. The members of a community are of two classes; the nursing sister, properly so-called, and the Sister of Mercy. The former goes through a course of training for three years, the latter for a year and a half. The syllabus is prepared by the central committee of the Red Cross Society. After completing the course the nursing sisters are employed either in military or civil hospitals of the State, or in the special Red Cross hospitals of the community to which they belong. They live either in the special buildings of the community or in nursing sisters' quarters in the hospitals where they are doing duty; but all who are employed in the zone of work of their community belong to that community and are paid and equipped by it. Each community has a superior, or matron, and is administered by special councils, the members of which are chosen from amongst the members of local Red Cross Committee.

The number of trained nursing sisters available in this manner for work in military hospitals both in peace and war is increasing annually. In 1891 the number was 1,330; ten years later 2,579; while at the same time it was estimated that more than 4,000, including those who had left the communities, had been fully trained. During the Manchurian campaign as many as 8,000 nursing sisters were said to have been sent by the Red Cross Society to military and other medical units or establishments.

The State pays to the Red Cross Society or to the community from which a nursing sister comes, a fixed fee for the services of each nursing sister employed in a military or a government civil hospital. Each sister has her own room in the community's headquarter building and when she retires on account of age can continue to stay there as a pensioner. The headquarter building is in fact a kind of nursing sisters' home.

Each community is named after some saint or is known by

the name of the locality or by some other religious or lay name. There are for example the community of the Exaltation of the Holy Cross, already referred to, also in St. Petersburg the communities of St. George, St. Eugenie, Alexander and Elizabeth, the communities of Alexandra and "*Iverskaia*" in Moscow, of "*Kasperow*" in Odessa, the community of "Archangel" in Archangel, and so on. A community of St. Mary Magdalene with an excellent hospital of the Red Cross Society was established at Port Arthur.*

General character of voluntary aid in Russia.

The general character of voluntary aid in Russia as distinct from similar organizations in other continental countries may be summed up as follows:—

- (1) There is one voluntary aid society only, the Red Cross Society, which is more or less a State institution.
- (2) Its peace organization is mainly an organization for collecting money.
- (3) It is, however, the main source of supply of trained nursing sisters both for civil and military institutions throughout the empire.
- (4) Many local committees organize in peace special mobile medical detachments for work amongst settlers and others in distant parts of the empire and places, difficult of access, where medical help is needed.
- (5) In war the resources of the Red Cross Society are mainly expended in improvising in the area of operations and along the lines of communication every possible variety of medical unit or establishment by means of commissioners and delegates.
- (6) With armies in the field it becomes a section of the directorate of medical services and works parallel to the regular medical services.
- (7) Private individuals, municipalities and others bodies may organize during war all kinds of units, mainly auxiliary hospitals, and send them to the seat of war under control of their own agents.

See "The Russo-Japanese War, Medical and Sanitary Reports," published by the General Staff, p. 255.

APPENDIX I.

PERSONNEL AND EQUIPMENT OF MEDICAL UNITS.

(1) LAZARETS OF REGIMENTAL UNITS.

The typical "regimental" *lazarets* are described below.

Lazaret orderlies are furnished from the unit, according to requirements, in addition to the numbers permanently employed in time of peace.

Transport personnel, for medical service vehicles, is part of the general transport personnel of the unit. The spare draught horses of regimental transport are for regimental vehicles in general, including those of regimental *lazarets*. In mounted units each medical officer has one horse; government servants are provided for officers and officials.

Company, squadron and battery *feldshers* generally keep with their formations, but they, as well as the stretcher-bearers, are included in *lazarets* as personnel under the regimental medical officers.

The number of packets of prepared dressings maintained as a reserve for replenishing bearers' and *feldshers*' haversacks, in the *lazarets* of infantry regiments and of artillery brigades, is shown below; in *lazarets* of other regimental units, and in the transport of regimental units which have no *lazarets*, reserves are carried in proportion to the strength of unit, viz., one packet for every 10 men, with 10 per cent. added.

The chief articles of *lazaret* bedding and clothing are mattress and pillow sacks, bed linen, towels, blanket rugs, cloaks, shirts, vests and woollen stockings.

The *lazaret's* preserved rations consist of meat, vegetables and groats. Stores of other dietary articles (tea, sugar, wine, spirits, etc.) are carried, also various other articles of steward's stores.

The equipment of regimental *lazarets* includes cooking kitchen and table utensils, and is in all essentials, (unless tents are required), sufficient for an independent dressing station or camp hospital.

(a) *Lazaret of infantry 4-battalion regiment.*

1 senior M.O. in charge.

4 junior M.Os.

- 1 senior, or official, medical *feldsher*.
- 4 junior medical *feldshers*.
- 1 dispensary *feldsher*.
- 16 company *feldshers*.
- 1 *nadziratel*.
- 128 stretcher bearers (attached during an action),
forming 32 stretcher squads.
- 4 ambulance wagons, 4-horsed, each for 8 sitting
or 4 lying and 1 sitting.
- 4 dispensary carts, 1-horsed.
- 1 baggage wagon for *lazaret* baggage and
stretchers, 2-horsed.
- 32 stretchers.
- 1 tent, officers' pattern, minus inner fly, for dressing
station.
- 440 packages of field dressings, reserve store.
- 16 sets of *lazaret* bedding and clothing.
- 160 reserve rations.

(b) *Lazaret of an independent battalion.*

- 1 senior M.O. in charge.
- 1 junior M.O.
- 2 medical *feldshers*.
- 4 company *feldshers*.
- 1 *nadziratel*.
- 32 stretcher bearers, attached during an action,
forming 8 stretcher squads.
- 1 ambulance wagon.
- 1 dispensary cart.
- 1 *lazaret* baggage wagon.
- 8 stretchers.
- 4 sets of *lazaret* bedding and clothing.
- 40 reserve rations.

(c) *Lazaret of cavalry 6-squadron (or Cossack 6-sotnya) regiment).*

- 1 senior M.O. in charge.
- 1 junior M.O.
- 1 senior medical *feldsher*.
- 1 junior medical *feldsher*.
- 1 dispensary *feldsher*.
- 6 squadron *feldshers*.
- 1 *nadziratel*.

- 24 stretcher bearers, attached during an action, forming 6 stretcher squads.
- 2 ambulance wagons, 2-horsed, each for 2 lying or 4 sitting.
- 1 dispensary cart, 1-horsed.
- 1 medical and veterinary baggage cart, 1-horsed.
- 6 stretchers.
- 6 sets of *lazaret* bedding and clothing.
- 60 reserve rations.

(d) *Lazaret of field artillery brigade of 6 batteries.*

- 1 senior M.O. in charge.
- 1 junior M.O.
- 1 medical *feldsher*.
- 6 battery *feldshers*.
- 1 *nadziratel*.
- 36 stretcher bearers, attached during an action: 6 from each battery, forming, with 2 *lazaret* orderlies, 2 stretcher squads.
- 3 ambulance wagons, 4-horsed, each for 8 sitting or 4 lying and one sitting.
- 2 dispensary carts, 1-horsed.
- 1 *lazaret* baggage cart.
- 12 stretchers.
- 220 packages of field dressings.
- 6 sets of *lazaret* bedding and clothing.
- 60 reserve rations.

(e) *Lazaret of horse artillery battery or of light (field) battery forming part of a rifle brigade.*

- 1 junior M.O.
- 1 junior medical *feldsher*.
- 1 battery *feldsher*.
- 6 stretcher-bearers.
- 1 ambulance wagon, 2-horsed, for 2 lying or 4 sitting.
- 1 dispensary cart, 1-horsed.
- 2 stretchers.
- 2 sets of *lazaret* bedding and clothing.

(2) DIVISIONAL LAZARET.

- 1 divisional P.M.O.
- 1 assistant to the divisional P.M.O.
- 3 junior M.Os.
- 1 officer as administration officer and commander of the bearer company.
- 1 accountant official as assistant to administration officer.
- 1 senior (or official) medical *feldsher*.
- 1 dispensary *feldsher*.
- 2 junior medical *feldshers*.
- 1 veterinary *feldsher*.
- 2 clerks.
- 2 *nadzirateli*.
- 20 men of the *lazaret* detachment.
- 17 non commissioned officers of the bearer company, including 1 serjeant-major.
- 200 rank and file of the bearer-company.
- 1 senior transport N.C.O.
- 1 junior transport N.C.O.
- 37 transport drivers.
- 8 ambulance wagons (4-horsed).
- 15 baggage wagons (2-horsed).
- 3 dispensary carts (1-horsed).
- 1 special wagon for tents (4-horsed).
- 4 marquees, (each for 20 men).
- 50 stretchers, with surgical haversacks, &c.
- 400 reserve rations, in addition to other steward's stores.
- 550 field dressings, in addition to special dressing material.

(3) MOBILE FIELD HOSPITAL.

- 1 S.M.O. as commandant.
- 1 senior ordinator (M.O.).
- 2 junior ordinators: in a divisional hospital,
3 junior ordinators (M.Os.).
- 1 pharmacist.
- 3 senior medical *feldshers*, of whom one may be an official.

- 4 junior medical *feldshers*.
- 1 senior dispensary *feldsher*.
- 1 junior dispensary *feldsher*.
- 1 junior veterinary *feldsher*.
- 1 administration officer (*smotritel*).
- 1 assistant to administration officer.
- 1 secretary.
- 1 chaplain.
- 1 sacristan.
- 4 sisters of mercy.
- 1 clerk on higher rate of pay.
- 2 clerks on lower rate of pay.
- 1 senior hospital *nadzirateli* (*feldfebel*).
- 1 storekeeper (*kaptenarmus*) as junior hospital *nadzirateli*.
- 4 non-combatant junior hospital *nadzirateli*.
- 5 ward *nadzirateli* on higher rate of pay.
- 20 ward *nadzirateli* on lower rate of pay.
- 34 general duty men.
- 1 senior transport N.C.O.
- 1 junior transport N.C.O.
- 26 transport drivers.
- 1 ambulance wagon, 4-horsed, to carry sisters of mercy.
- 19 baggage wagons, 2-horsed.
- 4 dispensary carts, 1-horsed.
- 1 wagon, special type, for tents; 4-horsed.
- 40 stretchers, with surgical haversacks, &c.
- 3 marquees, each for 20 men.
- 400 reserve rations.

(4) RESERVE FIELD HOSPITAL.

The establishment and equipment of a reserve field hospital differs from that of a mobile field hospital in that the former has no veterinary *feldsher*, only two drivers, no transport, tents or reserve rations, and only two stretchers.

(5) MASSED FIELD HOSPITAL.

- (a) For 420 beds.
- 1 S.M.O. in command.

- 2 senior ordinators (M.Os.).
- 4 junior ordinators (M.Os.).
- 1 pharmacist.
- 3 senior medical *feldshers* (one may be of official rank).
- 8 junior medical *feldshers*.
- 2 senior dispensary *feldshers*.
- 2 junior dispensary *feldshers*.
- 2 junior veterinary *feldshers*.
- 1 administration officer.
- 2 assistant administration officers.
- 1 secretary.
- 1 chaplain.
- 1 sacristan.
- 8 sisters of mercy.
- 1 clerk on higher rate of pay.
- 3 clerks on lower rate of pay.
- 1 senior hospital *nadzirateli* (*feldfebel*).
- 1 storekeeper (*kaptenarmus*) as junior hospital *nadzirateli*.
- 7 non-combatant junior hospital *nadzirateli*.
- 8 ward *nadzirateli* on higher rate of pay.
- 40 ward *nadzirateli* on lower rate of pay.
- 70 general duty men.

The number of vehicles and strength of transport personnel are fixed, according to requirements, by the inspector of hospitals.

(b) *For 630 beds.*

- 1 S.M.O. as commandant.
- 3 senior ordinators (M.Os.).
- 6 junior ordinators (M.Os.).
- 1 pharmacist.
- 6 senior medical *feldshers* (one may be of official rank).
- 12 junior medical *feldshers*.
- 3 senior dispensary *feldshers*.
- 3 junior dispensary *feldshers*.
- 3 junior veterinary *feldshers*.
- 1 administration officer.
- 2 assistant administration officers.
- 1 secretary.

- 1 chaplain.
- 1 sacristan.
- 12 sisters of mercy.
- 1 clerk on higher rate of pay.
- 4 clerks on lower rate of pay.
- 1 senior hospital *nadziratel* (*feldfebel*).
- 1 storekeeper (*kaptenarmus*) as junior hospital *nadziratel*.
- 11 non-combatant junior hospital *nadzirateh*.
- 12 ward *nadzirateh* on higher rate of pay.
- 60 ward *nadzirateh* on lower rate of pay.
- 100 general duty men.

The number of vehicles and strength of transport personnel are fixed, according to requirements, by the inspector of hospitals.

(6) FORTRESS TEMPORARY HOSPITAL.

- 1 S.M.O. as commandant.
- 2 senior ordinators (M.Os.).
- 4 junior ordinators (M.Os.).
- 1 pharmacist.
- 4 senior medical *feldshers* (one may be of official rank).
- 8 junior medical *feldshers*.
- 2 senior dispensary *feldshers*.
- 2 junior dispensary *feldshers*.
- 1 administration officer (quartermaster).
- 2 assistant administration officers.
- 1 secretary.
- 8 sisters of mercy.
- 1 clerk on higher rate of pay.
- 3 clerks on lower rate of pay.
- 1 senior hospital *nadziratel* (*feldfebel*).
- 1 storekeeper (*kaptenarmus*) as junior hospital *nadziratel*.
- 7 non-combatant hospital *nadzirateh*.
- 8 ward *nadzirateh* on higher rate of pay.
- 40 ward *nadzirateh* on lower rate of pay.
- 70 general duty men.
- 4 transport drivers.

(7) SICK AND WOUNDED TRANSPORT COLUMN.

- 1 field officer (commander).
- 1 senior M.O.
- 1 junior M.O.
- 1 commissary.
- 1 senior medical *feldsher*.
- 2 junior medical *feldshers*.
- 1 senior dispensary *feldsher*.
- 1 veterinary *feldsher*.
- 2 sisters of mercy.
- 1 clerk on higher rate of pay.
- 1 clerk on lower rate of pay.
- 2 *nadzirateli*.
- 17 attendants (rank and file).
 - 1 senior transport N.C.O.
 - 2 junior transport N.C.Os.
- 68 transport drivers.
- 27 ambulance wagons, 4-horsed, each for 4 lying and 1 sitting.
 - 1 mobile kitchen, 4-horsed.
 - 7 baggage wagons, 2-horsed.
 - 1 dispensary cart, 1-horsed.
- 60 sets of bedding and clothing for patients.
- 284 reserve rations.

(8) AMBULANCE TRAIN.

- 1 officer, in command.
- 1 senior M.O.
- 2 junior M.Os.
- 1 administration officer.
- 4 *feldshers*.
- 5 sisters of mercy.
- 25 attendants (*prislugi*).
- 20 men, of ranks lower than official grade, for general management.
 - 1 carriage for wounded officers.
 - 4 carriages for severely wounded of lower ranks.
 - 5 carriages for slightly wounded of lower ranks.
 - 2 carriages for material.
 - 1 kitchen carriage (with provision store).

- 1 carriage for dispensary, bath, surgery, and accommodation of female nurses.
- 1 carriage for commandant and officials.
- 1 carriage for personnel of lower ranks.

All carriages are adapted bogie (4-axle) third-class passenger coaches, except the store-wagons for *lazaret* material, which are 3-axle goods wagons.

Each train is fully equipped for 252 patients (including 20 officers), with two changes of bedding and clothing and a reserve of 40 per cent. of one change.

APPENDIX II.*

CONTENTS OF FIELD MEDICAL AND SURGICAL EQUIPMENT OF
BATTALIONS AND BRIGADES.*A.—First Field Dressing.*

Roller bandage, gauze, sublimated, $4\frac{1}{2}$ yards (4 m.) long by 3" wide.

Two pieces "gamgee" dressing, each 8" \times 8", folded.

The bandage and dressings are compressed together into a package 4" \times 2" \times 1" approximately, and done up in white cartridge paper.

This is covered with a grey-coloured rubber material, like thick jaconet. This is sealed by an adhesive material spread on the inner surface.

Directions for use are printed in Russian on the outside.

Two Safety Pins are enclosed in the rubber covering.

B.—Prepared Dressing.

Packets of compressed antiseptic dressings are prepared and kept in special boxes. Each packet contains :—

Compresses of corrosive sublimate gauze and cotton wool.

Gauze bandage.

Safety pins.

The packet is covered with a waterproof cover, sterilized and coloured pink.

C.—Surgical Havresack for Stretcher Bearers.

The chief articles are :—

Packets of field dressings and antiseptic gauze. (In cavalry bag, 26 field dressings, 30 packets gauze and 19 bandages. In infantry bag 20 field dressings, 20 packets gauze).

Nail brush, soap.

Tourniquets, small splints, calico arm slings.

Pins, needles, thread, tape.

* This appendix is taken from a report on the exhibition of Russian army medical equipment at the Paris Exhibition of 1900. The material and method of packing have not changed. See Appendix to A.M.D. annual report for 1899, page 424.

Flask of *vodka* (in cavalry bag).

Water flask, scissors and knife (in infantry bag).

One large water bottle issued with each havresack.

D.—Surgical Havresack for Feldshers.

Packages of compressed dressings and gauze, pins and needles.

Sp. Ammon. Aromatic.

Tinct. Opii, and *vodka*.

Sp. Etheris.

Feldsher's dressing case, nail brush, soap.

Tourniquets, arm slings, small splints, thread, tape, knife and scissors.

The havresack is of grey canvas, equipped in much the same way as our own, and of similar size and shape.

The cavalry use the same havresack, but it is carried in saddle bags.

One small water bottle issued with each havresack.

E.—Personal Equipment of Medical Officers.

This consists of a pair of saddle-bags containing :—

5 empty glass bottles.

1 measure glass.

1 aluminium box, containing 28 varieties of compressed tabloids.

1 aluminium box, containing 12 varieties of hypodermic tablets with syringe, etc.

1 case of instruments in ebonite case.

2 first field dressings.

1 rubber elastic tourniquet.

Note book with counterfoils.

Envelopes.

Compass.

Pair mathematical compasses.

F.—Equipment with each Battalion.

(Five boxes in one 1-horsed cart.)

Box No. 1.—70 cm. × 25 cm. × 45 cm. (*Drugs.*)

Tray containing bottles of medicines, partly tabloids, partly powders or crystals in bulk or liquid.

Drawer containing dispensing instruments, etc.

Box No. 2.—70 cm. × 25 cm. × 30 cm. (*Medical comforts.*)

Spirits of wine, 4 bottles.

Brandy 2 „

Preserved soups, 15 tins.

„ meat 15 „

Sugar, 6 lbs.

Tea, 1 lb.

Extract de Canneberge, 6 ozs.

Copper samovar (tea urn), 1.

Cups, 4.

Lantern.

2 copper candlesticks.

Box of matches.

Wax candles (1½ lbs.).

Cake of soap.

Box No. 3.—Same size as No. 2. (*Dressings.*)

First field dressings, 110.

Bandages:—

Aseptic gauze, 52 smallest width.

„ „ 49 medium „

„ „ 15 largest „

Starch „ 32 smallest „

„ „ 28 medium „

„ „ 9 largest „

Absorbent wool, 8 packages of 360 grms. each (compressed).

Box No. 4.—Same size as No. 2. (*Dressings and surgical materials.*)

Antiseptic gauze 70 m. in compressed packages.

Wool absorbent, 10 packets of 360 grms. each (compressed)

„ sublimate 2 „ „ „

„ ordinary 1 „ „ „

Bandages:—

Starched 5 smallest width.

Aseptic 61 „ „

Flannel 8 „ „

Calico 7½ „ „

Triangular 18 „ „

Adhesive plaster 3·5 m.

Glass bottles 26.

„ boxes 2.

Trusses	2 (right and left inguinal).
Paraffin paper	35 sheets.
Safety pins	50.
Elastic tourniquets	12.
Glass boxes	2.

Box No. 5.—90 cm. \times 35 cm. \times 36 cm. (*surgical instruments and fracture apparatus*), contains nested leg splints (tin) and 2 regulation instrument cases; with eye instruments, &c.

G.—Equipment with each Brigade.
(Ten boxes in two vehicles.)

(a) *Three boxes in a 1-horsed cart.*

No. 1.—90 cm. \times 35 cm. \times 36 cm., contains materials for operations, *i.e.*, anæsthetics, antiseptics, measuring glasses, drugs, dispensing instruments, 4 rubber irrigating apparatus and tubing, and a toilet box for the surgeon, holding 2 towels, 3 nail brushes, 5 pieces of pumice-stone, 3 nail cleaners, and 2 litres of sterilised water.

No. 2.—90 cm. \times 25 cm. \times 45 cm. (*Materials for "immobilization" of fractured limbs.*)
Sheets of millboard.
Flat ribbons of tin for strengthening the millboard.
Starched bandages.

No. 3.—90 cm. \times 50 cm. \times 45 cm. (*Dressings.*)
Sublimate wool } Compressed packages of 360 grms.
Absorbent " } each, filling half the box.
Plain " }
Starched bandages.
Aseptic gauze bandages.
Triangular bandages, 30.
Sublimate gauze dressings ready cut, in 4 soldered tin boxes.

(b) *Seven boxes in a 2-horsed wagon.*

No. 1.—90 cm. \times 35 cm. \times 36 cm. (width at bottom = 25 cm.), contains 95 compressed packages of ordinary wool.

No. 2.—Same dimensions.

Bandages:—

Aseptic gauze	120 of larger width.
" "	430 of medium "
Calico	510 " "
Flannel bandages	22 of largest width.

No 3.—Same dimensions.

Bandages:—

Starched 180 of largest width.

” 120 of medium.

Paraffin paper 250 sheets.

Triangular bandages 120.

No. 4.—70 cm. \times 25 cm. \times 30 cm.

Sublimate wool, 17 packages of 360 grms. (compressed),
i.e., 12 lbs. altogether.

Absorbent wool, 27 packages of 360 grms. each (compressed), about 20 lbs.

No. 5.—Same dimensions as No. 4.

Sublimate wool, 2 packages of 360 grms.

Antiseptic gauze, 36·5 m. \times 2·9 m., cut into separate pieces and contained in soldered metal boxes.

No. 6.—Same dimensions as No. 4.

Absorbent wool packages—about 21lbs. in aggregate.

Ordinary wool (in green packages), about 10lbs. in aggregate.

No. 7.—Same dimensions as No. 4, contains empty bottles, dispensing and pharmaceutical utensils, etc., sponges, and some cotton bandages.

APPENDIX III.

VOCABULARY OF TERMS USED IN CONNEXION WITH THE
RUSSIAN ARMY MEDICAL SERVICE IN THE FIELD.

The vocabulary is arranged according to association instead of alphabetically.

The Russian terms are simply transliterated from the Russian character, certain mute vowels being omitted: it is practically impossible to indicate pronunciation.

Personnel.

<i>Russian terms</i>	<i>English equivalents.</i>
Vrach	Surgeon.
Chirurg	Specialist Surgeon.
Glavni Voenno-Meditsinski	Director-General of the Medical
Inspektor	Service.
Okrujni Voenno-Meditsinski	
Inspektor	P.M.O. of a military district.
Polevoi Voenno-Meditsinski	
Inspektor	P.M.O. of an army in the field.
Korpusni Vrach	P.M.O. of an army corps.
Kryepostnoi Vrach	P.M.O. of a fortress.
Divizionni Vrach	P.M.O. of a division.
Brigadni Vrach	Senior medical officer of certain
	brigades.
Starshi Vrach	"Senior" medical officer.
Mladshi Vrach	"Junior" " "
Glavni Vrach	S.M.O. of a hospital.
Starshi Ordinators	"Senior" medical officer doing
	duty in a hospital.
Mladshi Ordinators	"Junior" medical officer doing
	duty in a hospital.
Farmatsevt	Pharmacist.
Feldsher	Assistant to medical (veterinary
	or pharmaceutical) officer.

*Russian terms.**English equivalents.*

Klassni feldsher	Feldsher of official rank.
Starshi feldsher	"Senior" feldsher.
Mladshi feldsher	"Junior" feldsher.
Meditinski feldsher	Medical feldsher.
Aptekni feldsher	Dispensary feldsher.
Rotni feldsher	Company feldsher.
Eskadronni (sotenni) feldsher	Squadron feldsher.
Batareini feldsher	Battery feldsher.
Nachalnik sanitarnoi chasti armii	Director of Medical (and Veter- inary) Services of an army: by regulation the Adjutant- General.
Inspektor Gospitaliei	Inspector of hospitals.
Myestni nachalnik gospitaliei	Local commandant of hospitals.
Predsedatel Evacuatsionnoi Komissii	President of an Evacuation Commission.
Chlen Komissii	Member of an Evacuation Commission.
Komandir	Commander of medical transport.
Komendant	Commandant of ambulance train.
Svyashchennik	Chaplain (orthodox).
Smotritel	Administration officer.
Kommisar	Commissary.
Secretar	Secretary.
Nadziratel	Hospital serjeant, wardmaster, etc.
Kaptenarmus	N.C.O. as storekeeper.
Pisar	Clerk.
Prislugi	Attendants.
Slujitel	General duty man.
Nosilshchik	Stretcher bearer.
Glavnoupolnomochenni	Chief Commissioner of Red Cross
Obshchestva "Krasnago Kresta"	Society.
Upolnomochenni	Delegate of Red Cross Society.
Predstavitel	Representative " "
Sestra milocerdiya	Nursing sister " "

*Medical Formations, etc.**Russian terms.**English equivalents.*

Lazaret	General term for a unit of the nature of a field ambulance or field hospital.
Gospital	Military hospital. ("G" is pronounced like "h.")
Zavedenie	Formation or unit.
Bolnitsa	Civil hospital.
Lazaret chasti voisk	Regimental ambulance.
Peredovoi perevyazochni punkt	Regimental or advanced dressing station.
Brigadni lazaret	Brigade ambulance of an independent rifle brigade.
Divizionni lazaret	Divisional ambulance.
Glavni perevyazochni punkt	Main dressing station.
Komanda nosilshchikov	Detachment of stretcher bearers.
Rota nosilshchikov	Company of stretcher bearers.
Polevoi gospital	Field hospital.
Podvijni polevoi gospital	Mobile field hospital.
Zapasni polevoi gospital	Reserve field hospital.
Svodni polevoi gospital	Massed field hospital.
Slabosilnaya komanda	Detachment of convalescents or convalescent depot.
Voennno-sanitarni transport	Sick and wounded transport column.
Voennno-sanitarni poyezd	Military ambulance train.
Vremenni sanitarni poyezd	Temporary (improvised) ambulance train.
Kryepostnoi vremenni gospital	Fortress temporary hospital.
Polevaya apteka	Field dispensary.
Vremenni aptechni magazin	Temporary depot of medical stores.
Polevaya Evacuatsionnaya Komissiya	Field Commission for clearing field medical units.
Tilovaya Evacuatsionnaya Komissiya	Commission for evacuating wounded on lines of communication.

*Russian terms.**English equivalents.*

Vnutrennaya Evacuatsion-naya Komssiyai	Commission for distributing wounded in the interior of the Empire.
Sborni punkt	Collecting or evacuating station.
Sanitarnie otryadi	Medical detachments, (of indefinite constitution).

Ambulance Material, &c.

Povyazka krasnago kresta.	Red cross brassard.
Flag krasnago kresta	Red cross flag.
Natsionalni flag	National flag.
Individualni paket.	First field dressing.
Antisepticheski paket	Packet of prepared field dressings.
Sanitarnaya sunka	Surgical havresack for stretcher bearers.
Peremetnaya sumka	Surgical saddle bag.
Feldsherskaya sumka	Feldsher's havresack.
Feldsherski nabor	Feldsher's instrument case.
Lekarski nabor	Surgeon's instrument case.
Fonar	Lantern.
Flyaga (dlya vodi)	Water bottle.
Nosilki	Stretcher.
Oboz	Horse transport.
Lincika	Ambulance wagon.
Povozka	G.S. wagon.
Aptecnaya dvukolka	Dispensary cart.
Sanitarnaya dvukolka	Medical cart (artillery).
Sanitarno-veterinarnaya dvukolka	Medical and veterinary cart (cavalry).
Pokhodnaya kukhnya	Kitchen wagon.
Vagon	Railway wagon.
Palatka	Tent.
Perevyazochniya sredstva	Dressing material.
Vrachebnie predmeti	Medical appliances.
Khirurgicheskie instrumenti i apparati	Surgical instruments and appliances.
Aptekarskie predmeti	Dispensary appliances.
Medicamenti	Drugs.



